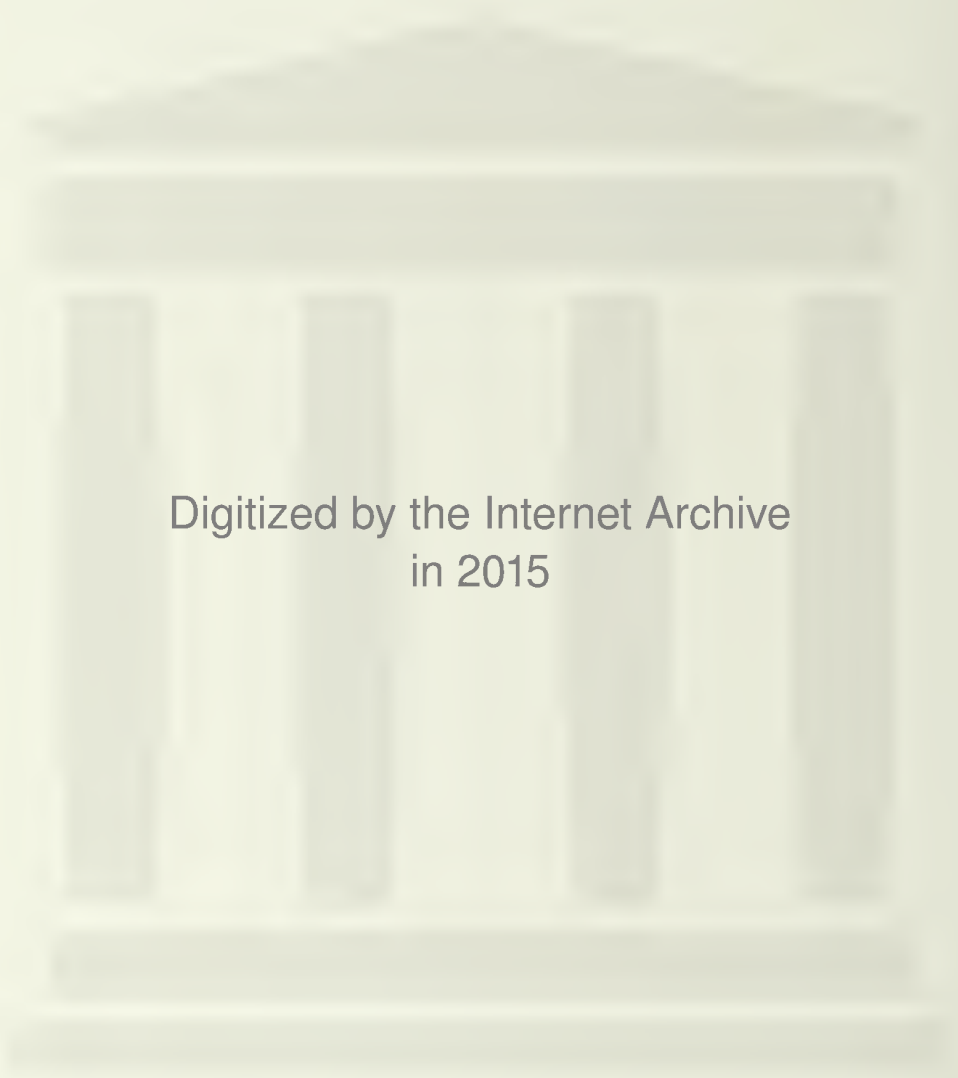

STREET RAILWAY TRANSPORTATION

REQUIREMENTS OF SAN FRANCISCO

1929

M. M. O'SHAUGHNESSY
CITY ENGINEER


STREET RAILWAY MAP
OF THE
CITY & COUNTY OF
SAN FRANCISCO
1929
M.M. O'SHAUGHNESSY
CITY ENGINEER
Scale
BAY OF SAN FRANCISCO
NORTH BEACH
WESTERN ADDITION
MISSION DISTRICT
POTRERO
HUNTERS POINT
TELEGRAPH HILL
RINCON HILL
FORT MASON
ALAMO SQUARE
CHINA BASIN
BAY VIEW PARK
COUNTY

CITY AND COUNTY OF SAN FRANCISCO
DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING.

REPORT ON THE

Street Railway Transportation Requirements of San Francisco

WITH SPECIAL CONSIDERATION TO THE
UNIFICATION OF EXISTING FACILITIES

PREPARED BY

M. M. O'SHAUGHNESSY, City Engineer,

UNDER DIRECTION OF THE BOARD OF SUPERVISORS,
ORDINANCE NO. 8125, NEW SERIES

MAY, 1929.

FOREWORD

In the preparation of the following report certain factors and considerations have been constantly in mind.

It is almost axiomatic that, from the standpoint of the riding public, the best service can be provided by a unified street railway system with universal transfers; also that on a given wage scale such a unified system under a single management can provide a given standard of service most economically.

San Francisco, under mandate of the people as expressed in our Charter, is committed to the proposition of municipal ownership of its public utilities.

The municipality in the operation of its own railway, after due consideration and by proper legal procedure, has adopted a standard of wages for its railway employees. In this report, in the endeavor to evolve an operating plan looking toward the continued maintenance of the five cent fare, no consideration has been given to the obvious possibility of a reduction of the wage scale, which has been considered as a fixed quantity.

As a result of the studies made, it is obvious that even the unified system cannot be operated on the municipal wage scale on a five cent fare, nor can the private company maintain its tracks and equipment in a satisfactory operating condition and render a proper standard of service on a five cent fare.

The recommendation to cover any deficit in the operation of a combined municipal system by a subsidy from taxes is considered to be sound in principle and not without precedent, as witness New York. Such a plan is believed to be far more desirable than an increase in the rate of fares.

M. M. O'SHAUGHNESSY,
City Engineer.

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CHAPTER I.

AUTHORITY FOR WORK.

On July 27, 1928 the Board of Supervisors by Ordinance No. 8125 directed the Board of Public Works to have the City Engineer investigate and report to the Board of Supervisors upon the immediate and future street railway transportation requirements of San Francisco. The report was to indicate to what extent and in what manner the existing street railway trackage and facilities in San Francisco could best be utilized in meeting present and future transportation requirements, and what portions of the existing privately owned street railway systems, if any, should be acquired by the City for use in connection with the expansion of the Municipal Railway system in providing unified street railway service. The report was also to indicate the results which might be expected from the municipal operation of such a unified system, viewed from the point of service to the public and from the financial aspect. The City Engineer was also to indicate any alternative method or plan for meeting the transportation requirements, other than purchase of the property by the City.

The City Engineer and the City Attorney jointly were authorized to make a valuation of the properties of the California Street Cable Railroad Company and the Market Street Railway Company, both as a whole and as to such parts thereof as the City Engineer might report were necessary or desirable for acquisition by the City. There has already been submitted a report covering the property of the California Street Cable Railroad Company whose franchises expired on February seventeenth of this year. The work on this line was pushed ahead of that on the Market Street Railway on account of the earlier expiration date of its franchises. A very considerable portion of the franchises of the Market Street Railway Company expire during the current year, and for that reason it is highly important that consideration be given to that company's future policy with relation to the people of San Francisco.

Personnel

As soon as possible after the final approval of the ordinance authorizing the work, I secured the assistance of Mr. Raymond C. Ashworth and Mr. Bruce W. Campbell to work in conjunction with Mr. Nelson A. Eckart, Chief Assistant Engineer, and Mr. Paul J. Ost, Electrical and Railway Engineer, of this office. I consider that the City was particularly fortunate in securing Mr. Ashworth's services, as he has been connected with the making of valuations of the San Francisco Street Railway properties twice in the past, once when connected with the California Railroad Commission, and again in 1921 when he was employed by me in the preparation of my report on the property as of that date. Since that time he has been engaged with Mr. Richard Sachse, Consulting Engineer, formerly Chief Engineer of the Railroad Commission, in which capacity he has been engaged in the valuation of the properties of the San Diego Electric Railway, the Honolulu Street Railway, the Key System in Oakland, and the Los Angeles Railway. It was largely through the courtesy of Mr. Sachse that he was released to us for work on this particular problem.

Mr. Campbell, whose attention has been directed specifically to the financial and operating problems, was also connected with the California Railroad Commission for about ten years; prior to which time he had been with the Portland Railways. Under the Commission he handled a great many very important cases dealing with electric railways in all parts of the State. One of these involved a complete report of the operations of the Pacific Electric Railway System, and

another a similar report on the Los Angeles Railway. Mr. Campbell left the Railroad Commission to associate himself with Mr. Sachse, and he has covered the same systems as Mr. Ashworth.

Mr. R. Vincent Douglas, who has been engaged with the Los Angeles Railway in making traffic checks and analyses and the preparation of schedules, was loaned to us by the Los Angeles Railway Company for similar work here. No work of this kind has been done in San Francisco since 1912, and the data which has been secured is very illuminating and most interesting.

Mr. C. G. Crockett was assigned as cost engineer in preparing the unit costs applied to the inventory. His experience in this line of work alone has covered a period of about thirteen years; six years of which were spent as cost engineer for the Interstate Commerce Commission Bureau of Valuation. He also served in a like capacity during the valuation of the Los Angeles Railway Corporation and of the San Diego Electric Railways, and for the past several years has been with the Valuation Department of the Great Western Power Company.

Mr. S. Wilkins was engaged in the field studies made of track depreciation. His experience especially fitted him for this work as it covers many years as engineer in charge of maintenance for the Winnipeg Electric Railway Company during which time he was associated with the engineers who made two valuations of the property. He was employed on the valuation of the Los Angeles Railway and in charge of the forces on the San Diego Electric Railway appraisal. Under H. G. Butler he represented the East Bay Cities during the valuation of the Key System.

Mr. Laurence V. Degnan, office engineer, regularly attached to my staff under Mr. Ost, has rendered most effective service in co-ordinating all of the office work. He first became associated with my office in the making of the 1921 valuation of the Market Street lines and since that time he has been continuously employed on Municipal Railway and kindred work. His familiarity wth all of the problems has made his services most valuable. He has worked early and late in the preparation of the valuation.

We have been most fortunate in securing the services of these experienced men to take charge of the various sections of the work. We have also been able to secure as their assistants, other men with considerable previous experience on valuation work. All of the men have been particularly trained in the work in California, although many of them have had experience elsewhere.

Among the women employees, the work of Mrs. Ethel Cullen, who has had to do with the stenographic and typing work, and of Mrs. Irene Griffin, who has been responsible for a considerable amount of the work of computation, is particularly worthy of mention.

In order to carry on the work, it was necessary to secure considerable additional office space and as no room was to be had in the City Hall, arrangements were made to use three rooms in the Exposition Auditorium.

It was originally expected that the work could be completed in January of this year. Two unforeseen difficulties were encountered which resulted in seriously delaying the work. First, several previous valuations have been prepared for the Market Street system, the first of these being that made jointly by the California Railroad Commission and the United Railroads as of December 31, 1916. This was later brought up to June 30, 1920, by the Engineers of the Commission. As of June 30, 1921, I submitted a valuation based on the original 1916 inventory, plus additions and betterments to the date of the valuation. When the H. M. Byllesby Company took over the property in 1926, they desired a valuation, and one was made by them as of June thirtieth of that year. For this present report it was thought that it would not be necessary to make a new inventory. All of these valuations

were based on the original 1916 joint inventory, with adjustments for additions and betterments. In making the present valuation it has been necessary to correct the original inventory for the changes occurring during the past twelve years, and considerable difficulty was experienced in reconciling the properties found in the field with the records which were available. In making the estimate as to the cost and the time of completion, it was expected that the 1926 valuation would bring the condition of the property up to that date. Such, however, was not the case and for many accounts it has been necessary to go into the field and actually make an inventory.

Second, a great deal of difficulty was experienced in getting men for the traffic survey work. It was impossible to secure Mr. Douglas' services until September 10, 1928, and owing to the limitations and restrictions of the Civil Service requirements, much difficulty was encountered in securing and maintaining an efficient force for making the traffic field checks.

During October, November and December, the work was greatly hampered by an epidemic of "flu" resulting in the absence of twenty-one individuals for periods of from one to twelve days.

The purpose of the check of traffic was to show normal week-day travel. Weather conditions and holidays affected this travel sufficiently to cause the loss of twenty-four days time, although the men were used on office tabulations as much as possible when outside work could not be done.

CHAPTER II.
HISTORICAL.

The Market Street Railway Company which took over the operation of the street railroad lines in San Francisco on April 1, 1921, has a long line of predecessors; a history of these covering the complete evolution of street railway transportation in San Francisco is set forth in detail in the report of Bion J. Arnold, Pages 411 to 429.

Beginning with the omnibus lines in 1852, transportation facilities have kept abreast of improvements in the art: however the growth of the system has not kept pace with the growth of the community. The present system and the manner in which it is maintained, are comparable to those found in any city of San Francisco's size, where the street railway systems have passed through these various stages of development.

The first street railroad in San Francisco was incorporated in 1857, and in 1860 tracks were constructed on Market Street from California Street to Mission Dolores. This line was steam operated, and a half hour schedule was maintained. Later steam operation was abandoned and horse car service established. This Company's success was followed by the incorporation of several other companies which operated horse car lines in various parts of the City.

The first cable line was put into operation in 1872 on Clay Street. The cable road was a San Francisco invention designed by San Francisco engineers to meet the local hilly conditions. Its success resulted in this method of transportation being adopted not only in San Francisco but throughout the United States within a short time.

The Market Street Cable Railway Company was granted franchises in 1879 with lines on Market Street, Valencia Street, McAllister Street, Hayes Street, and Haight Street. The first of these roads was completed in 1883. The Sutter Street Railroad Company, which commenced operation in 1865 with horse car lines, was changed into a cable operated system in 1876 with a franchise running until 1888, which was renewed in 1879 by a franchise covering a period of fifty years.

Early in 1879, a new State Constitution was adopted, and prior to January 1, 1880, when it took effect, practically all companies then existing secured fifty year franchises. This feature is responsible for the large number of franchises held by the Market Street Railway Company as successors to the earlier companies, which expire in the year 1929.

The first electric line operated in San Francisco was the San Francisco and San Mateo Railroad Company, which in 1891 started running from Steuart and Market Streets to the county line via Steuart Street, Harrison Sreet, Fourteenth Street, Guerrero Street, and San Jose Avenue.

The Market Street Railway Company was incorporated October 11, 1893. Mr. Arnold reported that "Southern Pacific interests" were behind the new corporation. This new company took over most of the existing lines of that date, namely:

Market Street Cable Railway Company.
Market Street and Fairmont Railway Company.
City Railroad Company.
Potrero and Bay View Railroad Company.
Southern Heights and Visitacion Railway Co.
Park and Ocean Railroad Company.
Ocean Beach Railway Company.

Central Railroad Company.
The Omnibus Railroad Company.
The North Beach and Mission Railway Company.
Ferries and Cliff Railway Company.
Metropolitan Railway Company.

This left the San Mateo, Sutter, Geary, California, and Union Street lines still operating independently. In 1895 Adolph Sutro built a line via California and Clement Streets from the end of the Sutter Street line to the Beach. The Market Street Company had refused to co-operate with him to provide for a five cent fare to the Sutro Baths. Later the Sutter Street Railway Company took over this line.

The United Railroads to 1912

In 1900 the San Francisco and San Mateo line was purchased by what was known as the "Baltimore Syndicate." This really was the beginning of the next step under which the United Railroads of San Francisco was incorporated, March 4, 1902, taking over all the properties of the Market Street Railway Company, the San Francisco and San Mateo Electric Railroad Company, the Sutter Street Railway Company, Sutro Railroad Company, Gough Street Railroad Company, and the South San Francisco Railway and Power Company and combining two hundred and twenty-nine (229) miles under one management. This incorporation continued to operate as the United Railroads of San Francisco until April 1, 1921.

Prior to the fire and earthquake of 1906, a very large portion of the company's lines was cable operated. Many of these old cable lines and their power plants were so badly damaged by the disaster as to require rebuilding. The conditions were opportune for the installation of electric service wherever the grades were not prohibitive and consequently during the period from 1906 to 1910 the United Railroads spent a great deal of money in the reconstruction of cable lines into electric lines and in the general rehabilitation of the entire system.

It is readily conceivable that a system formed from a large number of competing companies must necessarily include some trackage which was either not necessary or not capable of being efficiently operated in conjunction with other lines of the system. This was found to be the case with the United Railroads. The Company took advantage of the opportunity when changing from cable to electric operation following the fire, to make some needed rearrangements in its trackage. Other changes have been made from time to time since 1906 so that the system as it stands today contains fewer pieces of road which may be classed as needless duplications than would otherwise be expected. These pieces are being eliminated from consideration in our study for unified operation.

In common with all of the street railways of the United States which have been in operation for any considerable period of time, capitalization reflects in many ways the cost of replacing the various types of construction and motive power which were retired through obsolescence. These changes came about so rapidly as to make it almost impossible to amortize the cost of changing from one system to another before it was necessary to undertake the construction of still another.

When the United Railroads was incorporated in 1902 there were left three independent lines, namely, California Street Cable Railroad Company, Presidio and Ferries Railroad Company, and Geary Street, Park and Ocean Railroad Company. The franchises of the latter expired in 1903.

The Municipal Railway

In December, 1902, prior to the expiration of the Geary Street and Ocean Park franchise, an election was held looking toward the issuance of $700,000 in

bonds for the purpose of rebuilding the cable line as an electric railway to be owned and operated by the City. This was defeated, likewise a similar measure in October, 1903.

When the franchise of the Geary Street line expired on November 6, 1903, the company was allowed to continue operation, turning over a percentage of its receipts to the City. This arrangement continued until May, 1912, when the municipality actually undertook construction work over the streets used by the cable line. Three other unsuccessful attemps were made to secure funds for building the line, and it was not until December 30, 1909, that the first bonds were voted.

On December 28, 1912, the railway began operating on Geary Street from Kearny Street to Thirty-third Avenue. This later was extended to reach from the Ferries to the Beach, and proved extremely popular.

The coming of the Panama Pacific International Exposition brought about the necessity of additional street railway service, which the then United Railroads refused to supply under existing franchise conditions. In August of 1913 a bond issue for three and a half million dollars was voted for extensions of the Municipal Railway.

On December 11, 1913, when the franchise of the Presidio and Ferries Railroad, operating on Union Street, expired, the property was purchased out of this bond issue at my valuation.

The first new line completed out of the bond issue was the road on Van Ness Avenue, which was placed in service on August 5, 1914, being followed quickly by lines on Potrero Avenue, Stockton Street, Columbus Avenue, North Point Street, and the Fort Mason Loop.

Early in 1915 the California Street or "C" line was placed in operation.

The Church Street line, from Van Ness Avenue westward, was not placed in service until August, 1917, due to disagreement over the route to be followed and the operation on Market Street and on Church Street between Market Street and Sixteenth Street, which streets were already being used by the United Railroads.

In February, 1918, the Twin Peaks Tunnel line was operated as far east as Van Ness Avenue on Market Street, and on Van Ness Avenue to Bush Street. In June, 1918, the four tracks on Market Street between Geary and Van Ness Avenue were completed and placed in service.

The Taraval Street line commenced operation as far as Thirty-third Avenue on August 12, 1919, being extended to the Beach on January 14, 1923. The Twin Peaks Tunnel or "K" line, originally operated no farther than St. Francis Circle. On February 21, 1919, the service was extended to Miramar Avenue over the United Railroads track on Ocean Avenue under an agreement by which the City paid the Company $100,000 for an operating right over its tracks. Later operation was extended to the Municipal tracks built on Brighton Avenue.

On October 6, 1925, the Ocean View or "M" line was placed in operation.

On October 21, 1928, the latest addition to the Municipal Railway, the "N" line, running from the Ferry to the Beach via Duboce Avenue, the Sunset Tunnel, and Judah Street was placed in service.

In addition to the rail lines, a number of bus lines have been operated, pending the completion of the tracks, and five routes still continue in service. Thus the muncipality has tried to keep faith with the people who, by charter, have indicated their desire for municipal ownership of public utilities.

The United Railroads 1912-1921

In 1912, at the suggestion of Bion J. Arnold, employed as a Consulting Engineer on transportation matters, a charter amendment known as No. 34 was

submitted to the people. This would have granted the United Railroads an indeterminate franchise and would have made possible the securing of extensions to the United Railroads' lines, and also have made possible the purchase or taking over of the lines by the people at any time. This amendment, however, did not receive public approval.

Since that time there has been a more or less continuous agitation for the purchase of the privately owned lines by the City. In 1917 the City Engineer was instructed by Resolution No. 14852 of the Board of Supervisors to confer with the management of the United Railroads and arrange for a basis of valuation on which the privately owned lines might be purchased. On March 4, 1918, the following report was submitted by the City Engineer:

> Memorandum of Basis of Calculation for Purchase and Sale of United Railroads Properties, as agreed by M. M. O'Shaughnessy, City Engineer, and William von Phul, Vice-President and General Manager, United Railroads, March 2, 1918.
>
> 1. The sale price of the properties of the United Railroads of San Francisco to the City and County of San Francisco shall be the agreed present physical value of the property plus an amount equivalent to the probable net earnings of the railroad properties during their remaining franchise life.
>
> 2. The present physical value shall be the cost to reproduce new as of December 31,1917, with allowance for betterments to date of consummation of sale, less depreciation, based on the actual physical condition at the date of the consummation of sale. The cost to reproduce new shall be based on a physical inventory of the property and unit prices representing the average of normal conditions for the five-year period 1913-1917, inclusive, and cognizance shall be taken of existing conditions at the time the present property was constructed. The general principles recognized by the Interstate Commerce Commission and the State Railroad Commission shall be followed in making the valuation. In the valuation of the physical property, abandoned trackage shall be taken at its value for old material, and allowance made for its removal and the restoration of the streets.
>
> 3. The probable net earnings—to be computed by the best agreed methods—of the properties during their remaining franchise life shall be the difference between the probable gross revenue and the probable gross operating expense for the properties for the period from the date of consummation of sale up to and including the year in which franchises approximating 134 miles have expired, plus an allowance for the additional net earnings of the remaining several and isolated lines if operated independently to the expiration of the several franchises. The net earnings shall be taken as the remainder of the gross receipts of the property after deducting operating expenses, taxes, depreciation sufficient to maintain the properties in their present condition under like future operating conditions, and interest on the agreed value of the physical property at the same rate which the City shall pay upon its deferred payments for the physical property.
>
> 4. Payments on the purchase price of property shall be made semi-annually from the operating receipts. Deferred payments on the physical value of the property shall bear interest at 4½% per annum. Payments on that portion of the net earnings value of the property shall bear no interest.
>
> 5. Nothing in the above basis of valuation shall be construed to prevent the establishment of a fair price for the purchase and sale of the properties as between a willing seller and a willing buyer.
>
> 6. In the event that the representatives of the United Railroads and of the city are unable to reach an agreement, then such matters as are in dispute shall be referred to an arbitrator who shall be jointly selected by the City Engineer and the representative of the United Railroads. Any expenses incurred in arbitration shall be borne equally by the United Railroads and the City of San Francisco.

On March 25, 1918, by a sixteen to two vote of the Supervisors, the Board of Public Works was directed by Ordinance No. 4538 to make a valuation of the United Railroads properties for the purpose of arriving at a purchase price as outlined in the above report. The sum of $15,000 was set aside from the funds of the Municipal Railway for this work. This Ordinance was superseded by Ordinance No. 4632 of July 12, 1918, which empowered and authorized the Board of Public Works to investigate the condition and appraise the value of the United Railroads for the purpose of purchase and set aside from the Municipal Railway funds the sum of $15,000 to cover the cost of the work.

On August 5, 1918, a temporary injunction was secured by the Secretary of the Street Carmen's Union enjoining the Board of Public Works from spending any of the Municipal Railway funds as directed in the Ordinance. This injunction was later sustained by the Supreme Court.

Under No. 27 on the November 1918 ballot, a charter amendment was submitted to the electorate providing for the purchase of public utilities out of their earnings on the partial payment plan without resorting to a bond issue. This amendment did not carry though lacking only 3000 votes out of a total of 70,000. The popular demand and the apparent desire of the majority of the people for a similar enabling act brought forth on the 1920 ballot Charter Amendment No. 30. This Charter Amendment was almost identical with that submitted in 1918 and carried by a large majority. Under it a public utility, in whole or in part, may be purchased and paid for out of the earnings, provided the proposition has been submitted to and approved by affirmative votes of the majority of the electors of the City voting upon the proposition, or approved by two-thirds of the electors voting upon the question if the acquisition involves the incurring of an indebtedness or liability exceeding in any year the income and revenue received from the property during such year.

On April 20, 1921, the Mayor approved Resolution No. 18819 of the Board of Supervisors directing the City Engineer to make an appraisal of the properties of the United Railroads, and to report to the Board as fully as possible his findings and conclusions in accordance with the provision of Charter Amendment No. 30.

The 1920-21 budget contained no funds for such work and as the City had already been restrained from using the Municipal Railway funds, it was necessary to await the approval of the 1921-22 budget before the investigation and valuation could be made.

On April 1, 1921, the United Railroads of San Francisco was reorganized for the purpose of refinancing under the name of "Market Street Railway Company."

The Market Street Railway Company

The Market Street Railway Company through this reorganization acquired all of the property of the United Railroads of San Francisco and the cars and Pacific Avenue cable station of the San Francisco Electric Railways. The San Francisco Electric Railways sold all of its property to the Gough Street Railroad Company and the Market Street Railway Company. The Gough Street Railroad Company retained all of its property and in addition acquired the rights of way, tracks and distribution system of the San Francisco Electric Railways. The Market Street Railway Company in return received from the San Francisco Electric Railways and the Gough Street Railroad Company all of their physical property, in return for which it was to guarantee the payment of the bonds of these two companies.

Refinancing Bonds of 1924

On February 11, 1924, at the request of the Company, the California Railroad Commission, by Decision No. 13130, authorized the Company to issue and sell $13,000,000 in first mortgage 7% sinking fund gold bonds, due April 1, 1940, to

be sold at not less than 93% of their face value and accrued interest. The proceeds were to be used to pay in part $4,198,000 of 6% collateral trust notes due April 1, 1924, and $9,200,550 of first mortgage 5% bonds due September 1, 1924.

The following is quoted from the decision of the California Railroad Commission, and sets up very clearly the present financial obligations of the Company:

"The Market Street Railway Company has an authorized stock issue of $32,150,000, of which $31,926,450 is outstanding. The Company's outstanding stock consists of $11,618,500 of 6% cumulative prior preference stock; $4,986,850 of 6% cumulative preferred stock; $4,673,700 of 6% non-cumulative second preferred stock and $10,647,400 of common stock. During 1922 and 1923 the company has paid 6% dividends on its prior preference stock. No dividends have been paid on any other class of stock.

"As of December 31, 1923, the company's funded debt amounted to $13,508,550, and consisted of $4,269,000 of 6% collateral trust notes due April 1, 1924, and $9,239,550 of 5% first mortgage consolidated bonds due September 1, 1924. Since December 31, 1923, the company has acquired $71,000 of the collateral trust notes, leaving $4,198,000 of such notes outstanding, and $39,000 of first mortgage bonds, leaving $9,220,550 of such bonds outstanding.

"As of December 31, 1923, the company's current indebtedness amounted to $478,424.43, as contrasted with current assets of $2,018,072.32. The current assets include cash and special deposits of $1,491,231.80. The company will use current assets to pay such portion of its collateral trust notes and first mortgage bonds as it will not be able to pay with the proceeds obtained from the sale of its first mortgage 7% bonds.

"The mortgage or deed of trust which applicant asks permission to execute secures the payment of an authorized issue of $15,000,000 of 7% first mortgage bonds dated April 1, 1924, and due April 1, 1940.

"The mortgage or deed of trust is a lien on all of the property which the company now owns or which it may hereafter acquire, except cash (other than cash deposited or required to be deposited with the trustee) accounts receivable, bills receivable, stocks, bonds, notes, certificates of indebtedness and similar intangible property whether now owned or hereafter acquired. If any of the events of default occur, the mortgage or deed of trust becomes a lien on all the property of the company. The company covenants to provide a quarterly sinking fund of $500,000 per annum from January 1, 1925, through 1932. The sinking fund payments are to be invested in the company's bonds which are to be purchased in the open market at not to exceed their redemption prices, or, if not so obtainable, are to be called at that price. All bonds purchased are to be kept alive in the sinking fund until January 1, 1933, and the interest on such bonds used to acquire additional bonds. On January 1, 1933, all bonds then in the sinking fund shall be canceled, and thereafter the company agrees to provide a quarterly sinking fund of $300,000 per annum until the maturity of the bonds. The sinking fund payments subsequent to January 1, 1933, shall be invested in the same manner as sinking fund payments made prior thereto. It is estimated by applicant that the operating of the sinking fund, assuming bonds purchased at the redemption prices, will reduce the bonded debt from $13,000,000, the initial issue, to $8,071,500 on January 1, 1933, and to $5,460,500 on January 1 1940. The amount of bonds outstanding may be further reduced through the purchase of bonds at less than the call price and through the sale of mortgaged property. The proceeds from the sale of any such property must be added to the fixed sinking fund payments.

"After September 1, 1924, the $13,000,000 of bonds which the company now asks permission to issue will constitute its only funded debt. The company has sold the bonds at ninety-three (93) per cent of their face value and accrued interest. Assuming all bonds were to remain outstanding until maturity, the effective interest rate, considering only the discount, is about seven and seventy-five hundredths (7.75) per cent.

The redemption of bonds prior to maturity through sinking fund payments will increase the effective interest rate to more than 8%. Charles N. Black, applicant's president and general manager, testified that negotiations were had with several parties for the sale of the bonds and that he regarded the offer of ninety-three (93) and accrued interest, by Dillon, Read and Company and associates, as the most satisfactory. Were it not for the fact some of applicant's important franchises expire on or before January 1, 1933, existing municipal competition and the uncertainty of what the attitude of the City will be at the time the franchises terminate, the Commission would not authorize the sale of the bonds at ninety-three (93) and accrued interest."

Byllesby Control

At this time the stock controlling the Market Street Railway Company was held by the California Railway and Power Company and the United Railways Investment Company, which in turn held the majority interests of the California Railway and Power Company. The stock of the Sierra and San Francisco Power Company, which was supplying the electrical energy for the operation of the road, was also held by the California Railway and Power Company. In 1925 a new corporation, "The Standard Power and Light Company," took over the control of the United Railways Investment Company and the California Railway and Power Company. This concern was under the control of the Standard Gas and Electric Company, which in turn, was controlled by the H. M. Byllesby Company, who hold one class of stock which elects four out of the five directors. They also hold some of the common stock which elects the one remaining director. The Byllesby Company's holdings are in the minority, so far as financial values are concerned, but through its control of the directorate, it dictates all policies of the Company.

As a subsidiary of the Standard Gas and Electric Company, the Byllesby Engineering and Management Corporation operates and manages the various subsidiaries of the companies under the control of the Standard Gas and Electric Company. These properties include:

Pittsburgh Utility Corporation
The Philadelphia Company
San Diego Consolidated Gas and Electric Co.
California-Oregon Power Company

and many other properties all over the United States. Stock of the Standard Gas and Electric Company was issued to minority holders of stock in the United Railways Investment Company and the California Railway and Power Company, and these two corporations were dissolved.

The Standard Power and Light Company now holds 122,150 votes out of the total 319,264 votes controlling the Market Street Railway. Twenty corporations, firms or individuals hold 173,590 of the 319,264 votes. The remaining votes are scattered over 1624 other owners. Out of these 173,590 votes, only 5,000 are shown as being held in San Francisco. Four out of the seven directors, not officers of the Company, reside in either New York or Chicago.

The Market Street Railway Company owns 96% of the stock of the South San Francisco Railroad and Power Company, and 99% of the stock of the Gough Street Railroad Company, the Metropolitan Railway Company, the San Francisco and San Mateo Electric Railway Company, the Sutro Railroad Company and the Sutter Street Railway Company.

The Byllesby interests assumed control of the Market Street Railway property in November, 1925.

The Arnold Report

Mr. Bion J. Arnold, in 1912, by authority of Resolution No. 8725, prepared a very comprehensive report on the improvement and development of the trans-

portation facilities of San Francisco. This report was submitted under date of March, 1913. It did not go into the matter of valuation and was confined to details of service and routing suggestions and as to improvements in cars. Considerable space was given to the possibilities of tunnel construction, and in a general way, plans were made for extensions which seemed advisable at that time. Some of these proposed extensions were laid out to serve the Panama-Pacific Exposition. A considerable section of the report was taken up with a proposed Charter Amendment looking toward the granting of an indeterminate franchise, and in summarizing the franchise status of the system then operating. This report has been of great assistance in many ways.

The 1921 Report of the City Engineer

The next comprehensive report was that which I submitted covering the value of the property of the Market Street Railway Company as of June 30, 1921. In addition to establishing a cost of reproducing the property, this report also considered the matter of depreciation. The total figures taken from this report are set forth along with the figures of the Company and the Railroad Commission under the chapter of this report entitled "Valuation."

This report led to considerable discussion by the Board of Supervisors looking toward the purchase of the property for unification with the Municipal Railway. A special committee consisting of the Mayor, the members of the Finance and Public Utilities Committees of the Board of Supervisors, the City Attorney, and the City Engineer were instructed to study the problems involved in arriving at a price and the method of payment. They were also requested to study the possible results to be expected from the unification of the two systems.

The conferences of this committee brought out considerable additional data with relation to operating results which could be expected and the possible financial gain or loss to the City on assuming control. No study was made as to the possibilities of rerouting or of traffic problems which would be encountered.

Mr. William von Phul, at that time President of the Company, and Mr. A. L. Black, Valuation Engineer of the Company, were invited to attend several meetings of the committee. Mr. von Phul was asked to set a price on the property which would be acceptable to the owners. This he was unable to do. He was then asked if he thought a price of $40,000,000 would be acceptable, to which he replied that it would be necessary for him to take it up with the Directors, but that he would not recommend this price to them as he considered it too low. On the other hand, a number of the members of the committee felt that $40,000,000 was too high, making it useless to submit the proposition to the Directors.

No definite conclusions were reached from the deliberations of this committee. Later, Supervisor John McGregor, then a member of the Finance Committee, undertook to solve the problem. He attacked the problem from a little different angle, as he attempted to arrive at a price which the City could afford to pay for the property if all costs had to be met out of earnings with a five-cent fare under the conditions which would be imposed under municipal ownership. His efforts were likewise unsuccessful in leading toward the acquisition of the property, or a permanent settlement under Company ownership.

In June, 1922, Mr. von Phul resigned as President, and Mr. Mason B. Starring became President. Mr. von Phul, also his predecessor, Mr. C. N. Black, and Mr. A. L. Black, Valuation Engineer of the Company, were connected with the engineering firm of Ford, Bacon and Davis, of New York City, Mr. C. N. Black and Mr. von Phul being members of the firm. Mr. Starring represented the financial, rather than the engineering side of the organization. He again opened up the subject of pur-

chase and several unsuccessful conferences with the City Officials were held in the Mayor's office.

The 1925 Initiative to Purchase

The next move was the organization of a group of citizens into what was called "The League for Railway Unification." Without question this organization was sponsored by the Company. By initiative petition, signed by over twenty-six thousand citizens, there was put on the November, 1925, ballot a proposition to purchase the property of the Market Street Company for $36,000,000. The City was to assume bonds in the amount of $12,500,000, and was to pay the Company the remaining $23,500,000 in installments with interest at 5% on deferred payments. This proposition was not satisfactory to the Board of Supervisors, nor to the City Engineer, and publicity was given to their opposition. At the polls it was decisively defeated.

During Mr. Starring's tenure of office, Mr. Samuel Kahn, who had for some time been connected with the Western States Gas and Electric Company, with headquarters in Stockton, was selected Executive Vice President of the Company. The Western States Gas and Electric Company was one of the concerns controlled by the H. M. Byllesby Company, which concern later acquired the control of the property.

Under date of December 18, 1927, Mr. Kahn, in an interview with a local newspaper, made the following statements:

> "The Market Street Company is now under an entirely new control.
>
> "The new owners did not acquire the property to sell it to San Francisco or to anyone.
>
> "Development of the properties, to make it second to none in the country, is the hope and policy of the new owners.
>
> "If the people decide to acquire the physical properties, on which the franchises are soon to expire, the owners will make an amicable agreement as to terms.
>
> "It will not be necessary to wait until the franchises expire to fix the terms of the agreement; it can be done at any time."

The 1926 Byllesby Valuation

Following the acquisition of the property by the Byllesby organization, engineers were sent from Chicago by them to make a valuation of the property. They tried to enlist the cooperation of the State Railroad Commission and the City Engineer with a view to securing an agreed figure for the value of the property. As the City Engineer did not have authority to undertake the work on his own initiative, and as the matter was not formally before the Commission, a joint valuation was not made.

On the completion of the work, all data was sent East, and I was not advised as to the result of the valuation until the present work was undertaken, when, through the courtesy of Mr. Kahn, I received a copy of the Valuation Summary.

Each year in my Annual Reports, I have stressed the necessity of action, looking toward the definite settlement of the railway problem which will confront the City at the time the franchises expire.

The problem of working out a satisfactory plan of operation which would give the best possible service to the public is not one of great difficulty from a physical standpoint. The great difficulty has always been to reach a solution which would permit unified operation of the transportation facilities of the City and which would be satisfactory to the municipal authorities, the owners of the properties, the general public, and the self-constituted critics and amateur experts.

The 1928 Initiative—Revocable Permit

In response to my definite recommendations—that an appropriation be made for the purpose of making a valuation and study of the problem, the Board of Supervisors included in the 1928-29 budget the sum of $30,000 to apply toward the cost of the work and passed Ordinance No. 8125, under which this report is being submitted.

Proponents of continued Company ownership, not being satisfied to await the outcome of this report, had placed on the ballot of November 6, 1928, by initiative petition, Charter Amendment No. 24 which proposed an indefinite franchise arrangement under which the holders of the franchises would surrender them to the City, following which, immediately and automatically by operation of law and without further act on the part of such Company or by the City, they should have and hold, in place of the surrendered privileges or franchises, a revocable permit from the City, giving the Company the right to continue to operate on the terms and conditions contained in the original franchise surrendered, except that there would be no condition as to the duration of the right or franchise.

Further, quoting from the amendment, "Every revocable permit, as in this section provided, shall be for an indeterminate period, and subject always to the right of the City and County to acquire and possess as a whole all of the operative railway properties of the holder of said revocable permit in the City and County by paying a fair value therefor."

The amendment set up the method as to how this "fair" value might be determined, and required that after its determination, the property would have to be taken over within twelve months, but not earlier than three months. It also provided that the Board of Supervisors would have the power to grant supplemental revocable permits, authorizing the construction and operation of extensions to existing lines. It also prohibited the abandonment of service, except through securing the proper ordinance from the Board of Supervisors.

The proponents spent considerable money in a house to house canvass throughout the city, urging the support of the voters and in an aggressive campaign of newspaper and billboard advertising.

The Company reports the expenditure of over $30,000 in the campaign for the amendment. Workers were stationed at the polling places on election day.

In spite of these efforts, the people voted against the amendment as follows: Yes, 72,156; No, 100,526.

This amendment received the heaviest vote of any of the sixty-two propositions on the ballot, thus registering the interest of the people in the subject and their stand as to private versus municipal control of the railways as proposed in the amendment.

The Wilcox Report

This brief history of the Market Street negotiations would not be complete without referring to the report made by Delos F. Wilcox. By Resolution No. 27649, adopted on August 8, 1927, the City Attorney was directed to make a full and complete research of all matters pertaining to the expiration of the franchises under which the privately owned railway companies operate in the City and County of San Francisco, what rights and properties will revert to the City upon the expiration of these franchises, as well as of the rights and properties which will remain in the possession of the street railway companies at the date of expiration of their franchises, and also, where certain street railway routes are operating over tracks having different franchises, what effect the expiration of one of these franchises will have on the operation of that particular line.

The City Attorney was further requested to advise what action shall be necessary to compel the railway companies to cease operation on the expiration of their franchises, or under what conditions, if any, the City might enter into a temporary agreement with the companies for the continued operation of their street railways after the expiration of their franchises. Under this resolution, and, acting jointly with the Finance and Public Utilities Committees of the Board of Supervisors, there was employed by the City Attorney, Mr. Delos F. Wilcox, Ph. D. His employment was authorized by Resolution No. 27804, passed by unanimous vote of the Board of Supervisors on September nineteenth, fixing the compensation at $10,000. This was returned by the Mayor on September twenty-ninth "disapproved," and finally made effective October 10, 1927, by the action of the Board notwithstanding the Mayor's objections.

This report was not in any way original, being a compilation of data taken from various sources. The report, submitted on November 1, 1927, is entitled "Preliminary Survey of Franchise Expirations and other Matters Affecting the Policy of Unification of Street Railway Transportation under Municipal Ownership and Operation." A great deal of the data included in the report had never before been brought together in such concise form, but the conclusions and recommendations made were so impractical that they were given but very scant consideration by the Supervisors.

In brief, it was suggested that the California Street Cable Railroad Company be offered $1,000,000, and the Market Street Railway Company $20,000,000 for their operative properties within the City and County of San Francisco, or, as an alternative, the estimated actual cost of the existing units of useful necessary property other than land, less the depreciation accrued thereon from all causes, to be determined by the Railroad Commission as the historical reproduction cost of the structural property, less depreciation, exclusive of paving on lines for which the franchises will have expired in 1929, plus the present market value of the rights-of-way and other lands owned by the companies now in use for street railway purposes as fixed by the Stafford Appraisement.

Should the companies refuse to accept the price offered or the alternatives proposed, he suggested that the Board of Supervisors pass the necessary resolutions ordering the companies to cease operations on the streets of the City as and when the franchises expire, and that the Board take the necessary steps to lay out and adopt extensions of the Municipal Railway System adequate to give complete transportation service within the City limits; that the Board of Supervisors procure from the Board of Public Works plans and estimates for the cost of these extensions to the Municipal Railway and solicit offers from the existing owners of street railway property as required by the Charter, and unless satisfactory offers are received, require the companies to remove their tracks and fixtures from the streets as the franchises expire, and substitute therefor on routes which the City desires to continue, new municipal construction and equipment, proceeding under Section 499 of the Civil Code to acquire joint interest in and operating right over tracks still owned by the companies under unexpired franchises on streets covered over which it is desired to operate such extensions to the Municipal Railways.

No action followed the submission of this report as it was evidently impossible to attempt to follow the recommendations. My report on the California Street Cable Railroad shows that it would have been unwise for the City to have offered the company $1,000,000 for their property.

The next year's budget included funds for the work in hand as already set forth.

CHAPTER III

PRESENT TRANSPORTATION FACILITIES OF SAN FRANCISCO.

The layout of San Francisco is unique in that the City and County of San Francisco occupies the head of a peninsula some forty miles in extent, running northerly and southerly between the Pacific Ocean and the Bay of San Francisco. The City covers an area of approximately forty-two square miles. The contour is quite rough, consisting of a number of hills, some reaching an elevation of over nine hundred feet above sea level. More than seventy-five per cent of the area of the City is over one hundred feet above sea level. On account of the hills, the layout of the City is irregular in many spots, the main street "Market" running in a northeasterly and southwesterly direction. The streets lying to the north of this main thoroughfare run approximately due east and west and north and south, while the streets south of Market Street run either at right angles or parallel to Market Street.

The high value business area of the City lies along Market Street from the Ferry Terminal on the Bay of San Francisco westwardly for a distance of two miles, the retail and financial districts lying north of Market Street, and the wholesale and light manufacturing districts south of that thoroughfare.

The entrances to San Francisco, other than by automobile, are as follows:

The only all-rail steam train entrance to the City is that of the Southern Pacific Company, terminating at Third and Townsend Streets, approximately seven-eighths of a mile southeastwardly from Market Street. Through this gate pass the Coast Line trains from all points south and those from the east which enter California over the Southern Route; also a very heavy steam suburban traffic from the Peninsula.

The main passenger entrance to the City, however, is through the Ferry Building at the foot of Market Street. Into this terminal come the Shasta, Ogden, San Joaquin and Sacramento Valley Routes of the Southern Pacific Company, the Western Pacific Railway and the Santa Fe Railway, also the Northwestern Pacific Railway, which serves the coast of California north of San Francisco, and the Sacramento Northern Electric, which serves the Sacramento Valley.

The following interurban lines, reaching the East Bay and North Bay Districts, also terminate at the Ferry:

The Southern Pacific East Bay Suburban Service.

The Key System Transit Company.

The Northwestern Pacific Marin County Suburban Service.

Also adjacent to the Ferry Building are the piers of the river steamers operating to Sacramento and Stockton, and way points, also the pier of the Monticello Steamship Company operating to Vallejo where connection is made with the Napa Valley Electric Lines. There are also seventeen piers south and twenty piers north of the Ferry Building, into which the steamships from all parts of the coast and the world come.

Automobile ferries are operated by the Southern Pacific Company to Richmond, Oakland, and Alameda from the piers immediately to the south of the Ferry, and automobile ferries to Marin County are operated from the north end of the Ferry Building via the Northwestern Pacific. Additional automobile ferry service from the foot of Hyde Street to Marin County and to Berkeley is given by the Golden Gate Ferry Company. These three ferry systems have recently been combined under

one managament. A small number of automobiles is also handled via Monticello and river steamers.

Automobile stage service to all points outside of San Francisco comes into the City either via the automobile ferries or the peninsula highway. The principal stage center is at Fifth and Mission Streets.

The present transportation facilities within the City of San Francisco consist of three street railway systems, namely: California Street Cable Railroad Company, San Francisco Municipal Railway, and Market Street Railway Company. Data covering the extent of the three systems is given in Table No. 1, which, in addition to the information on each system, gives totals for the combined systems.

TABLE I.

STREET RAILWAY SYSTEMS OF SAN FRANCISCO FROM DECEMBER 31, 1928, ANNUAL COMPANY REPORTS

	California Street Cable Railroad	Municipal Railway	Market Street Railway	Total All Systems
Miles of track owned	11	78	284	373
Passenger Equipment:				
Electric Cars	..	234	725	959
Cable Cars	48	...	51	99
Automobile Buses	..	18	6	24
Work Cars	..	6	62	68
Number of Employees	189	1264	2851	4304
Aggregate Annual Salaries and Wages	$335,329	$2,245,378	$5,303,102	$7,883,809

The United States Post Exchange operates an automobile bus service within the Presidio Military Reservation connecting with the Municipal Cars at the terminal of the "D" and "E" routes. This bus line runs to Fort Winfield Scott and passengers are required to pay a separate fare.

The San Francisco Police Department reports one hundred and fifty active licenses for jitney buses operating within the City limits. These charge a ten cent fare. The principal routes followed are from Twenty-ninth Street to the Ferry via Valencia and Market Streets, from Twenty-ninth Street to the Ferry via Mission Street, and from Haight and Stanyan Streets to the Ferry. The California Street Cable Railroad operates nothing but cable cars; the Municipal Railway operates electric cars and automobile buses. The Market Street Railway operates electric cars, cable cars and automobile buses.

It has been previously stated that the business center of San Francisco lies in the northeast corner of the rectangle occupied by the City and from this same corner the ferry services extend. This condition, coupled with the angular position of Market Street with relation to all of the streets north of it, makes the traffic situation on this street exceedingly difficult. Practically all of the service which reaches Market Street is now routed through to the Ferry. The volume of service thus accumulating and the fact that both Muncipal and Market Street Railway lines use this street, has made it necessary to construct four tracks for the full length of Market Street. Under this dual usage of the street, no service is turned back once it gets on to Market Street. The angular relation of the streets north of Market Street does not lend itself to turning eastbound cars north out of Market Street, and this same angularity permits of no supplemental thoroughfare parallel to, and north of Market Street.

Market Street is a very distinct line of demarcation between the retail and financial districts and the wholesale district. This makes the service requirements of the area north of Market Street entirely different from those of the section south

of Market Street. The blocks south of Market Street are over six hundred feet in length, making it impractical to serve satisfactorily the retail and financial districts from even the first street south of Market Street.

The base of the hill known as Nob Hill extends down into the retail district towards Market Street to such an extent as to make a relatively narrow neck through which there are streets with grades sufficiently light for electric railway service. Those lines which pass over Nob Hill must all be operated by cable as they negotiate grades of twenty per cent or more. It is unfortunate that the northeast corner of the City was laid out on the rectangular plan, necessitating that streets go over the hills rather than follow around them on contour lines. This same comment applies to a number of other sections of the City which could have been laid out to better advantage had contour streets been used. All of the new modern subdivisions are being laid out to fit the contours. The streets north of Market Street are, with few exceptions, under seventy feet wide, which after deducting for sidewalks, makes them too narrow for efficient operation of both street railway and vehicular traffic. The universal subdivision of the property into twenty-five foot or thirty-seven and one-half foot lots, materially adds to the congestion of the population and business houses.

On a number of the streets the sidewalk width has been narrowed from the old standard of fifteen feet to a width of twelve feet. This has assisted in speeding up the street car service, but has not particularly increased the street capacity for automobiles as it is still difficult for the average driver to drive between a parked car and a street car even where there may be actual clearance.

California Street Cable Railroad

The California Street Cable Railroad consists of two lines—one running east and west on California Street from Market Street to Presidio Avenue; the other, a cross-town line, runs from Market Street at O'Farrell, west on O'Farrell to Jones Street, north on Jones Street to Pine Street, on Pine Street from Jones Street to Hyde Street, and north on Hyde Street to Beach Street, with an extension shuttle service on Jones Street from O'Farrell Street to Market Street. The system comprises a little less than eleven miles of single track and is all operated by cable. The California Street line runs through the heart of the financial district, while the cross-town line taps the retail shopping district and the theater district at the south end, and runs through a closely built-up apartment house district on the north end. Franchises for the entire system expired on February 17, 1929, and at the present time the road is being operated under sufferance. A complete valuation and report on this property was submitted to the Board of Supervisors in December, 1929.

Municipal Railway

The Municipal Railway, owned and operated by the City and County of San Francisco, operates 79.2 miles of main line trick, of which it owns 74 miles, and operates jointly with the Market Street Railway a little over five miles. In addition to this it owns 4.42 miles of side tracks, sidings, turnouts, etc., making the total trackage in which the road is interested 83.62 miles. In general this system consists of seven main east and west lines and three lines running generally north and south. In addition to these general routes, there is an extension over which shuttle service is operated into the Ocean View District, and five automobile bus routes. The larger part of the service given by the Municipal Railway lies north of Market Street or Market Street projected. Nine of the twelve rail routes and one of the bus routes reach the Ferry. All of the Municipal street car lines are electrically operated.

The equipment is housed in two concrete steel barns, both of which are located so that by taking advantage of the natural difference in grades on two

streets it is possible to store the cars on two levels. Both car houses are of fireproof reinforced concrete construction throughout. The older barn is at the corner of Geary Street and Presidio Avenue, and in addition to providing storage capacity for one hundred thirty-four cars, it houses the headquarters offices, limited shop space and totally inadequate facilities for automobile bus maintenance.

The other barn is at Mariposa and Hampshire Streets. This has division offices and storage capacity for one hundred seventeen cars.

One-half of a block between Seventeenth Street, Mariposa, York and Bryant Streets has been acquired for permanent shops for the Municipal system. The northern one-half remains still to be purchased when funds are available. Two efforts were made to do this in two bond issues submitted to the public without successfully receiving the necessary two-thirds vote.

The Municipal Railway buys direct current at 600 volts from the Pacific Gas and Electric Company under Schedule P-9, for which it pays 1.15 cents for the first 300 kilowatt hours per month per kilowatt of demand, and 1 cent per kilowatt hour for each kilowatt hour in excess of 300 kilowatt hours per month per kilowatt of demand, resulting in an average cost for the power consumed of 1.1 cent per kilowatt hour. The annual consumption is more than forty million kilowatt hours. The maximum demand is approximately ten thousand kilowatts.

The Municipal Railway owns and operates two types of car, one a small center entrance car of wood and steel with a single truck and special braking arrangement for use on the Union Street lines over grades approaching fourteen per cent. There are twenty-one cars of this type. All of the other cars are of semi-steel construction with double end drop platform and three compartments, suitable for heavy city traffic.

San Francisco is extremely proud of the Municipal Railway and particularly of the physical and financial accomplishment in completing same, which was all done under design and supervision of this Department.

Many adverse comments were made in the early days by antagonists, who predicted that the copper wire would be stolen off the streets by the municipal employees, and that there would be great inefficiency in the management. The reverse however, has been the case, and the workings of the actual project have disappointed all those "croakers." It is the best built and best equipped street railway system in the United States today.

The total extent of the contribution from taxes to the construction of the Municipal Railway system is $306,552.47, representing the interest charges during construction and certain bond election expense, which is partially offset by a contribution from the Railway funds to certain municipal projects to the extent of $82,123.73.

Aside from this the City has lent its credit through the issuance of $5,520,000 of bonds which financed the original Geary Street line and the so-called Exposition lines.

During the early years of operation, with a moderate wage scale, and the heavy Exposition traffic, the profits from the system were such as to provide $3,567,097.73 for the expansion of the system with profitable lines through the Twin Peaks Tunnel and the Sunset Tunnel. All of this was in addition to meeting all operating expenses, paying all interest charges on outstanding bonds, and redeeming all bonds as they have matured to the extent of $2,382,000, besides setting aside something over $400,000 for depreciation.

The fare still has been maintained at five cents and in spite of an increased scale of wages the road has so far successfully survived.

The only system which can attempt a similar showing is that of New York where the five cent fare is still maintained though at an additional cost of $14,000,000 yearly in taxes to pay interest in the subway investment.

Market Street Railway

The trackage of the Market Street Railway system as measured on the ground, comprises 291.9 miles of single track of which a little over sixteen miles are operated by cable, the balance by electricity. Thirty-three miles lie outside of San Francisco in San Mateo County. This is not the mileage given by the company in its annual report to the Railroad Commission. Complete details of the property are covered under Chapter IV. The system consists of one interurban line running from the heart of San Francisco to the town of San Mateo, serving a number of communities on the way. Inside the City the lines can be quite definitely divided into three sections, those serving the area north of Market Street, those serving the area south of Market Street, and cross-town lines. Of the rail routes thirteen are north of Market Street, sixteen are south of Market Street, eight are cross-town routes, and four are odd lines giving shuttle service. There are five routes operated by cable and three automobile bus routes. The rail lines of the Market Street Railway reach into all sections of the City. The Municipal lines reach some districts not adequately served by the Market Street Company, and at some points the two systems are more or less competitive.

In general the lines have been basically developed through years of operation by competing companies and are not the result of careful initial comprehensive study of the traffic needs of San Francisco. The ratio of transfer passengers on the Market Street lines to the total passengers carried is 26%; on the Municipal Railway lines and the California Street Cable Railroad this ratio is approximately 17%. The similar figure for the Oakland Street car lines is 22%. In general, the service of all three lines of cars is very good, and while there are cases of complaint they are very frequently found not to be entirely substantiated by the facts, or are occasioned by temporary conditions which are not the fault of the street railway operators. There are also some localities which receive more service than the traffic warrants. This is particularly the case where two of the systems serve the same district, in which case competition, rather than the traffic requirements, dictates the amount of service. During off peak hours there is an excessive service on Market Street, which is largely due to conditions already spoken of, and the desire to give direct service from all sections of town to the Ferry.

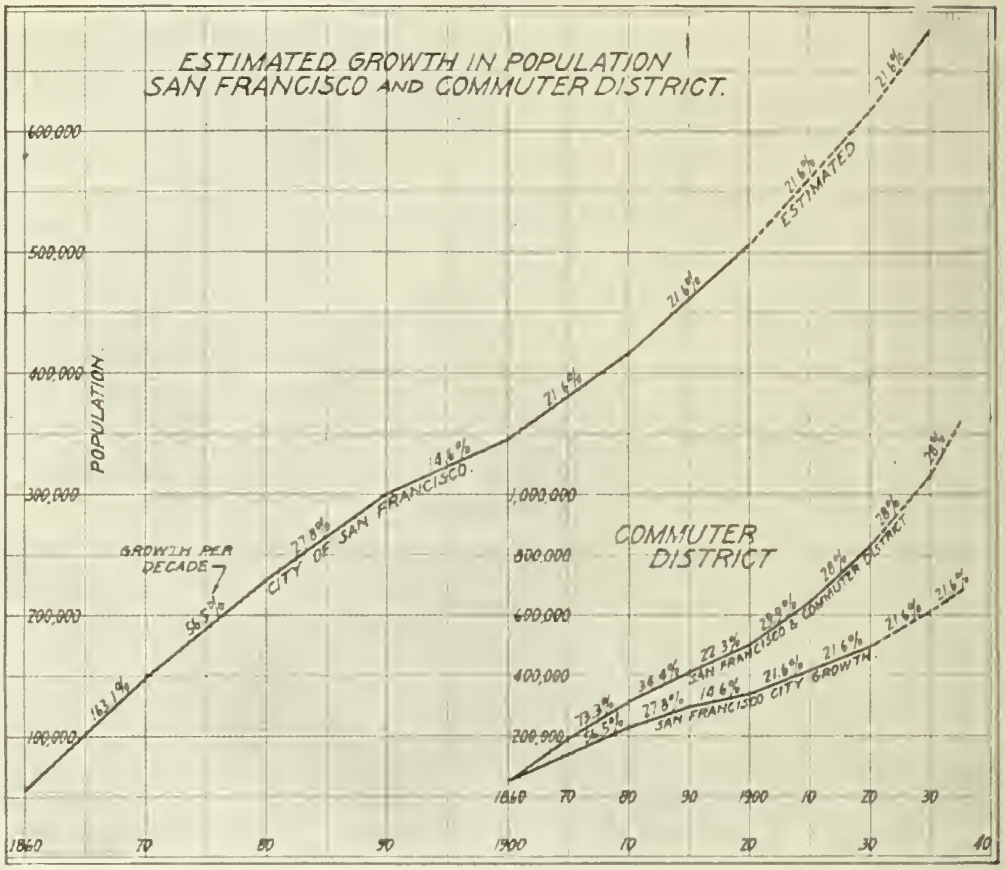
Cable operation is essential on some of the routes on account of the steep grades encountered and will have to be continued until some more satisfactory form of urban transportation over heavy grades has been devised. All of the cable power houses are now electrically operated. They were originally designed for use with steam engines for propelling the cables.

The three bus lines of the Market Street Railway recently instituted operate in the area lying between Mission Street and San Bruno Avenue. The district is in part very heavily populated and, in part, sparsely populated. These lines serve as feeders for the electric service on either Mission Street or San Bruno Avenue.

Population

The United States Census Bureau gave San Francisco a population of 506,676 in 1920. The Bureau's estimate of the population in 1928, calculated according to its rules, was 587,000. Estimates made by the San Francisco Chamber of Commerce place the population for 1928 at 742,000. The attached chart shows actual population growth for both San Francisco and the San Francisco and commuter district from the year 1860 to 1920 and estimated growth from 1920 to 1935.

During the two decades prior to 1920, the rate of growth of population in San Francisco was 21.6% and projecting this same percentage forward, the chart shows a population of 590,000 in 1928.



The commuter district which is tributary to San Francisco showed a growth of 29.9% from 1900 to 1910, and 28% from 1910 to 1920. Considering that the same 28% has continued since 1920, we find that the population in San Francisco and tributary thereto is approximately 1,020,000 in 1928.

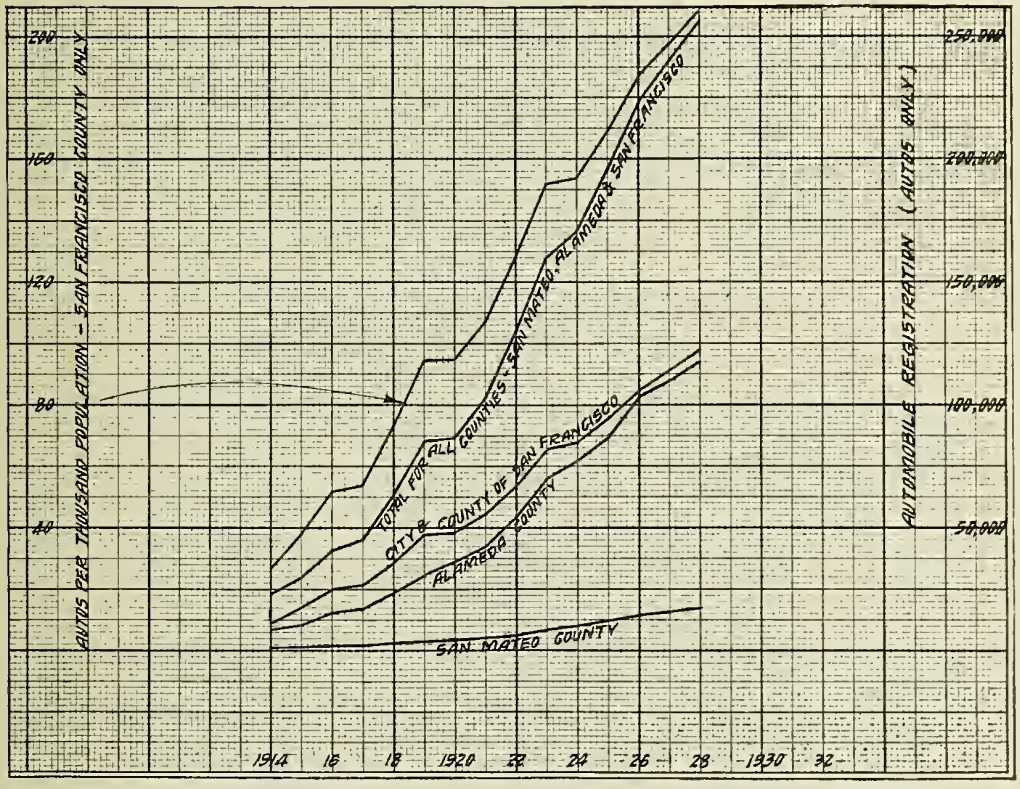
Effect of Automobile Traffic

The number of automobiles has increased by leaps and bounds and has had a marked effect on the street railway business. The attached chart shows the increase in the number of automobiles in San Francisco, Alameda, and San Mateo Counties as indicated by the State registration from the year 1914 to 1928 inclusive. During this period the number of automobiles in San Francisco has increased from 12,081 to 122,808, while the number in the three counties has increased from 21,788 in 1914 to 257,708 in 1928.

The development and improvement in the highways and the automobile ferry service has brought many outside automobiles into San Francisco. The number of automobiles per thousand population in San Francisco has increased from less than twenty-seven in 1914 to about two hundred ten in 1928.

In addition to the decrease in revenue brought about through the use of private vehicles, their extensive use has greatly retarded the free movement of street cars. It has also increased the number of accidents involving the street railways.

The congestion resulting from the use of the automobile has necessitated the installation of very rigid traffic rules and their active enforcement. For the better control of the traffic it has been necessary to apply traffic signals at many



intersections. While the effect of these is to eliminate confusion and insure safety, there is no question that they have slowed up all classes of vehicular traffic, particularly the street cars.

So far it has been impossible to synchronize the control of these signals in such a manner as to secure a uniform flow of traffic. It is also very questionable whether the progressive control, now in process of installation, will improve the speed of the street cars. Naturally, such a progressive system will be designed and operated to be of the greatest assistance to the largest number of vehicles. The speed with which the automobiles move will determine the signal timing. Street cars, loading and unloading passengers at intersections, will not be able to avail themselves of the advantages which will accrue to the automobile. Just what will be the result of the installation of the progressive signals with relation to the street railway traffic remains to be seen. If it is possible to adjust the timing of the signal system so as to permit the street car to utilize the time employed by the cross traffic in loading and unloading passengers, the progressive system may be of some assistance to the railways.

Tabulations of the total number of revenue passengers carried within the City by all street railway lines, show that in 1918 approximately 204,000,000 passengers were carried, and at the peak in 1925, 277,420,000 were carried. This number decreased to 273,943,000 in 1928.

When compared with the estimated population, a different aspect is presented. The number of revenue rides per capita for the year 1919 was 475, and the average number of rides per thousand population per day was 1301. The peak

was reached in 1923 when there were 501 revenue street car rides per capita per year or 1378 rides per thousand population per day. By 1928 these figures had dropped to 467 revenue rides per capita per annum, and to 1275 rides per thousand population daily.

While the actual number of passengers carried increased up until 1925, the actual falling off of patronage on the basis of population began in 1923. The automobile registration during the year 1923 showed the greatest increase of any year since 1919. This falling off in street railway business has not been followed by a like reduction in service as shown by the fact that the number of car miles operated during the year 1928 was 37,851,366 compared with 36,289,000 in 1925, and 35,501,000 in 1923. In other words, the railway lines have been furnishing a better service even in the face of a falling off in patronage. Similar conditions

OPERATING STATISTICS MARKET STREET RAILWAY - 1900 - 1928

TABLE NO. II

YEAR	TOTAL OPERATING EXPENSES	OPERATING REVENUES	REVENUE CAR MILES	REVENUE AND FREE PASSENGERS	POPULATION CENSUS BUREAU ESTIMATE	EARNINGS PER CAPITA	EXP. PER CAR MILE	REV. PER CAR MILE	RIDES PER DAY PER 1000 POP.	RATIO OPER. EXP. TO OPER. REV.
1900	$2,423,038	$4,687,070			343,000	$13.65	$	$		.517
1901	2,691,548	5,118,563			350,000	14.60				.527
1902	2,870,791	5,538,919	18,059,418	110,490,818	357,000	15.50	.159	.3040	847	.518
1903	3,255,317	6,243,219	19,548,425	124,600,555	365,000	17.10	.165	.3167	963	.521
1904	3,299,739	5,652,630	19,604,538	133,570,547	372,000	17.50	.158	.3380	985	.497
1905	3,228,942	7,065,892	19,617,850	141,928,262	380,000	18.50	.154	.3590	1020	.458
1906	2,719,227	5,955,786	15,250,150	119,906,309	285,000	20.82	.178	.3870	1160	.457
1907	3,448,292	4,745,116	12,570,488	96,056,856	320,000	14.80	.272	.3715	817	.725
1908	4,242,759	6,866,303	19,530,916	137,836,747	350,000	19.60	.217	.3348	1080	.618
1909	4,248,649	7,455,965	20,517,411	149,884,142	384,000	19.40	.207	.3420	1060	.559
1910	4,281,171	7,653,489	21,210,305	153,829,611	417,000	18.40	.202	.3585	1010	.560
1911	4,302,952	7,885,136	22,077,429	158,445,259	426,000	18.50	.195	.3552	1020	.545
1912	4,256,739	8,177,049	22,558,627	163,463,830	435,000	18.70	.187	.3582	1030	.521
1913	4,705,829	8,589,719	23,598,274	171,524,517	444,000	19.30	.199	.3615	1060	.547
1914	4,722,737	8,515,684	24,168,849	170,302,721	452,000	18.80	.195	.3496	1030	.555
1915	4,757,827	8,030,998	24,292,738	161,694,555	461,000	17.40	.196	.3280	950	.592
1916	4,904,834	7,751,743	24,249,205	155,954,472	470,000	16.50	.202	.3172	910	.632
1916	4,806,164	7,320,930	21,909,340				.219	.3315		.657
1917	5,594,575	6,355,532	21,388,452	127,718,638	479,000	13.20	.262	.2944	728	.880
1918	4,731,682	7,510,894	24,740,601	150,730,211	488,000	15.40	.191	.3012	850	.670
1919	6,106,150	8,629,347	25,503,852	173,291,020	495,000	17.40	.239	.3359	950	.707
1920	6,691,892	9,328,174	25,631,908	187,122,681	505,000	18.50	.261	.3615	1020	.717
1921	7,053,778	9,435,061	25,154,273	189,432,819	521,000	18.10	.280	.3751	995	.75
1922	6,860,038	9,583,437	25,092,130	192,527,816	529,000	18.12	.273	.3819	997	.72
1923	6,834,188	9,809,393	25,391,329	197,109,186	539,000	18.20	.269	.3863	1002	.70
1924	7,036,208	9,852,360	25,758,581	197,979,121	548,000	17.98	.273	.3824	987	.71
1925	7,053,040	9,902,758	25,807,751	198,826,619	558,000	17.75	.273	.3837	976	.71
1926	7,393,705	9,891,568	25,572,515	198,534,163	557,000	17,45	.278	.3755	959	.75
1927	7,540,858	9,819,570	26,666,192	197,074,070	577,000	17.02	.287	.3682	936	.78
1928	7,746,513	9,754,461	26,764,838	194,217,782	587,000	16.52	.289	.3545	906	.79

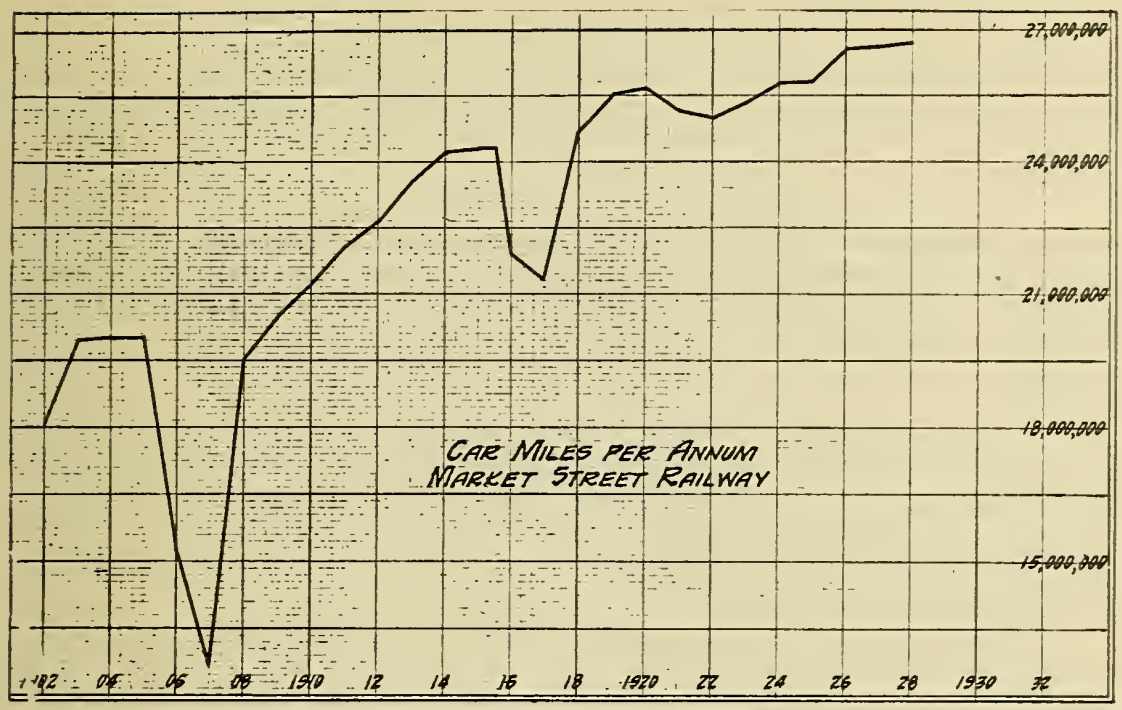
(Fiscal Year / Calendar Year)

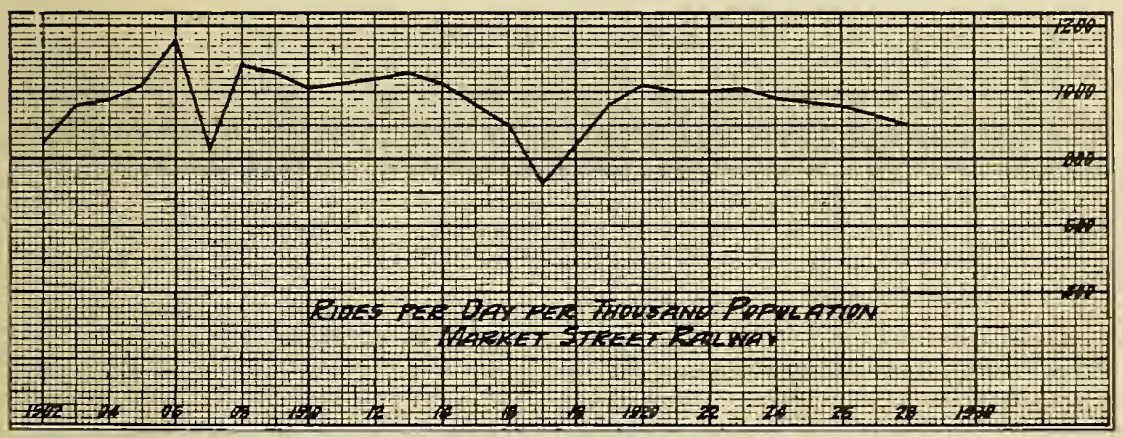
NOTE: In the above table earnings per capita and rides per day per thousand of population are based on United States Census Bureau estimates, from 1920 to 1928. If the population estimates of the San Francisco Chamber of Commerce had been used these ratios would have been somewhat lower. The Chamber of Commerce estimates of population are as follows:

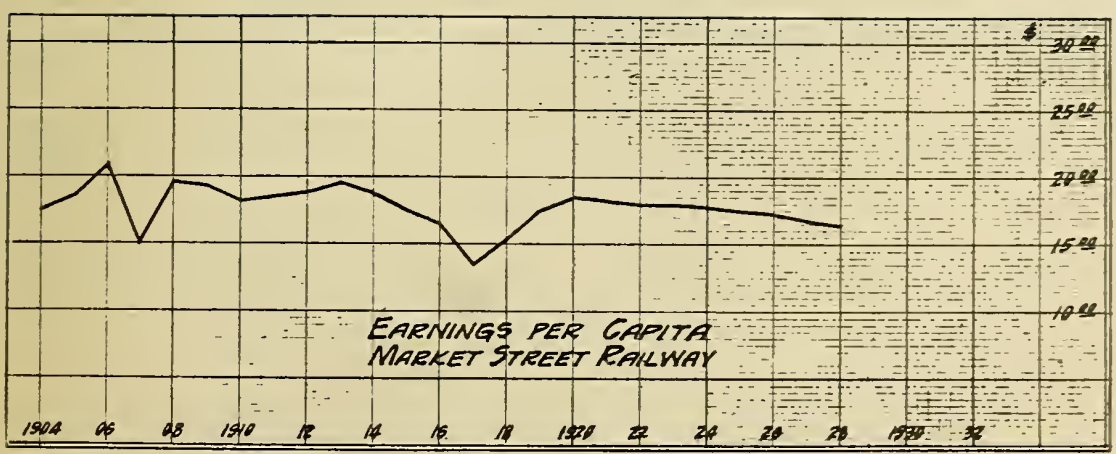
1920	506,676
1921	540,341
1922	574,006
1923	607,671
1924	641,336
1925	674,991
1926	705,391
1927	733,462
1928	742,063

are being experienced in all cities of the United States. There are a few exceptions to this rule in cities such as New York where congestion has greatly slowed down automobile traffic and where some form of rapid transit service, such as elevated trains or subways, avoids the delays incident to traffic congestion. Even in such cities, however, the rate of growth of urban transportation has noticeably slackened.

In many cities it has been claimed that the decrease in the use of the street cars has been due to marked increase in fares. This, however, is not the case in


27,000,000
24,000,000
21,000,000
18,000,000
15,000,000
CAR MILES PER ANNUM
MARKET STREET RAILWAY
1902 04 06 08 1910 12 14 16 18 1920 22 24 26 28 1930 32


RIDES PER DAY PER THOUSAND POPULATION
MARKET STREET RAILWAY


$ 30.00
25.00
20.00
15.00
10.00
EARNINGS PER CAPITA
MARKET STREET RAILWAY
1904 06 08 1910 12 14 16 18 1920 22 24 26 28 1930 32

San Francisco where the fare still remains at five cents. As of February 28, 1929, the Electric Railway Association reports that the average fare in the United States was 8.3266 cents in cities having a population of 25,000 or over, as compared with 8.1390 cents on February 29, 1928. Comparing January, 1928, with January, 1929, two hundred eight street railways reporting to the Association show a decrease of 1.72% in the number of passengers carried.

The adjacent Table No. II and three charts show the number of car miles operated annually by the Market Street Railway Company, the number of rides per day per thousand population, and the earnings per capita, from 1902 to 1928 inclusive. These show that in 1906 the number of rides per day per thousand population reached the maximum.

Jitneys

The Police Department reports that there are registered one hundred fifty jitney buses for furnishing transportation within the City. There are no data as to the number of passengers which they carry, nor as to the number of those registered now actually operating, although the one hundred fifty are all active registrations. This class of transportation has, however, materially fallen off since its peak year of 1917 or 1918.

As already noted, buses are operated within the Presidio Military Reservation by the military authorities for the convenience of soldiers and civilians. The amount of business is not great and it cannot be considered as having any bearing whatsoever on the general transportation system of the City, being purely a local convenience for those within the Presidio.

Service

The present standard of street railway service in the City of San Francisco is unquestionably materially above that of most other cities of the United States. In general the riding habit of the population is better established here than elsewhere, due no doubt to the hills which discourage walking, and also to the fact that for several months in the year the trade winds and sea fogs make walking more or less unpleasant. The frequency and convenience of service on many of the trunk lines encourage the use of the cars.

The competition between the three systems has worked to the advantage of the patrons. This is quite evident by the frequency of service given where lines of two systems closely parallel each other. That the railways are striving to hold patronage, in the face of the encroaching automobile, is very well indicated by the fact that while the city-wide traffic has fallen off 1.3% since the peak year in 1925, the car mileage during the same period has increased 4½%. More details as to service are covered later in this report.

CHAPTER IV

THE PRESENT MARKET STREET RAILWAY SYSTEM.

Franchises

As previously indicated, the Market Street Railway as it now exists, is a successor to a number of more or less disconnected franchises including original horse-car, steam dummy, and cable lines, reaching back to the beginning of transportation within the City; as such, many of its franchises overlap. Other franchises cover more of the streets than the Company now occupies. With the co-operation of City Attorney John J. O'Toole, the status of these franchises has been carefully gone into and there appears in the Appendix a report prepared by Mr. John J. Dailey, Assistant City Attorney, showing the franchises covering the various lines. There are a number of discrepancies between the claims of the Company and the facts as determined by the City Attorney. Both have agreed, however, that the franchises covering a very large percentage of the Company's track mileage will expire during the current year.

According to the City Attorney's report, the mileage in San Francisco County divided into the years in which the franchises expire is shown in the following table:

TABLE III.

SAN FRANCISCO FRANCHISE EXPIRATIONS IN TRACK MILEAGE BY YEARS

Franchise Expiration	Miles Single Track	Percent
Already expired or no franchise	5.531	2.2
Revocable Permit	2.594	1.1
1929	105.008	43.1
1930	9.528	3.9
1931	12.755	5.2
1932	4.027	1.7
1933	4.286	1.8
1935	.966	.4
1936	13.522	5.6
1940	38.733	15.9
1941	13.546	5.6
1942	15.577	6.4
1944	9.548	3.9
1947	.522	.2
Sub-total	236.143	97.0
Private right-of-way	7.209	3.0
Total Main Line	243.352	100.0
Car House, Yard Tracks, etc.	15.550	
Total—All Tracks San Francisco County	258.902	

Franchise expirations in San Mateo County are given in Table IV.

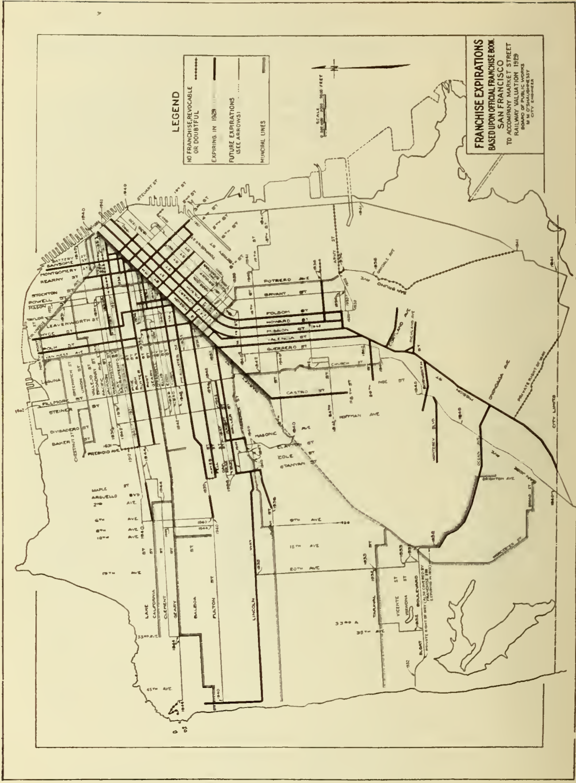

FRANCHISE EXPIRATIONS
BASED UPON OFFICIAL FRANCHISE BOOK
SAN FRANCISCO
TO ACCOMPANY MARKET STREET RAILWAY VALUATION 1929
LEGEND
NO FRANCHISE, REVOCABLE OR DOUBTFUL
EXPIRING IN 1929
FUTURE EXPIRATIONS (SEE ARROWS)
MUNICIPAL LINES

TABLE IV.

SAN MATEO COUNTY FRANCHISE EXPIRATIONS IN TRACK MILEAGE BY YEARS.

Franchise Expiration	Miles Single Track	Percent
1952	10.642	32.6
1958	1.015	3.1
1963	2.997	9.2
1965	.488	1.5
Sub-total	15.142	46.4
Private right-of-way	17.469	53.6
Total—		
Main Line	32.611	100.0
Spurs	.344	
Total All Tracks San Mateo County	32.955	

The franchise expiration dates of the various lines as determined by the City Attorney are shown on a map herein.

Tracks

The tracks of the Company are laid with grooved girder rails in paved streets except in a few locations where some of the obsolete sections of the old tram rail are still in place. On private right of way "T" rail is used.

All of the more recent construction and reconstruction has used a rail nine inches high, the greater portion of which is the Lorain Steel Company's section 106-422. The rails on lower Market Street weigh 121 pounds per yard. Under the terms of the franchise a company is required to keep up the pavement between the tracks and for two feet outside the outer rails. The Municipal Railway and the California Street Cable Railroad Company carry the same pavement burden.

That the street railway lines should be required to maintain paving, for which they have no use, and which carries jitney buses and private automobiles in direct competition, seems extremely unjust. In the past, when horses were used to draw the cars, pavement was a necessity. Not only does it carry competitive street traffic, but the fact that the pavement is there attracts vehicles to the railway right of way, resulting in delays and accidents to the street cars which would not otherwise occur.

In many instances the track pavement is in better condition than that adjacent to it, so that the space used by the railway carries in addition to its cars, practically all of the street traffic as well.

In order to successfully lay pavement along the tracks it is necessary to put in much more expensive railway construction. This not only increases the original cost but because the railway roadbed is sealed, it materially adds to the cost of any maintenance work.

That defective track conditions exist on certain lines where the franchises expire during the coming year, or within the next few years, is not at all surprising. The future of the Company's ownership has been so uncertain as to cause it to avoid making heavy expenditures for replacements where not absolutely necessary. This deferred maintenance may result in extremely unsatisfactory service on some portions of the system at no distant date and emphasizes the necessity for immediate action in determining the future policy to be followed.

A study was made of the tracks that comprise the electric system to determine as closely as possible what renewals would be necessary and the probable dates of such work. This analysis developed that about two-thirds of the electric system was constructed or renewed between the years 1906 and 1916. It also showed that

the lives of the various track sections varied from fifteen to thirty-five years when natural causes for replacement were considered. Among these causes are such factors as wheel mileage, type of equipment operated over the line, the grade of the track, subsoil conditions, type of track construction and the amount of maintenance it receives. In some cases the vehicular traffic on the street itself is a factor.

It sometimes happens that tracks are replaced before they are worn out on account of changes in grades of the streets or a change in the paving, which requires a new type of track to be laid. These replacements are usually on minor portions of the system and have not been considered in the study as they are impossible to forecast.

The average life for all of the electric system, exclusive of special work, including tracks under light and heavy traffic, yard tracks, etc., was found to be about twenty-six years, or almost the average between the maximum and minimum lives found for the various sections.

Due to the fact that the company built about two-thirds of the electric mileage between the years 1906 and 1916, it has had only the remaining one-third, or about seventy-five miles, that has required heavy maintenance and renewals, since the latter date. The remaining two-thirds of the system is now in the last half or third of its life which results in lowering the value of the property as a whole.

The period of low expenditures for renewals is about ended and the Company will soon face the necessity of replacing practically all of the tracks built prior to 1916, or about two-thirds of its system.

This reconstruction program will cover a period of about fifteen years beginning in the immediate future, during which time it will be necessary to reconstruct more than twice as much track per year as has been reconstructed annually for the last thirteen years. This means that without a marked improvement being shown in its financial condition the Company is faced with a grave problem.

Deferred renewals now exist throughout the system and it is estimated that they total about five miles of track over and above normal renewal requirements. At the present time about $400,000 is required in addition to the normal expenditures for renewals, to bring these sections of track to their proper condition.

The track special work on the system is not in as good condition as the tangent track due to its shorter life and also to deferred maintenance. To take care of this deferred maintenance on the special work it is estimated that about $150,000 should be expended in addition to the normal requirements.

It is estimated that beginning with the year 1930, an average expenditure of about $1,000,000 per year should be made for at least ten or twelve years to put the property in good condition and take care of the tracks and special work that will require replacement.

Shop and Car Storage Facilities

The Market Street Railway Company has extensive shop properties in the south central part of the City near San Jose and Geneva Avenues. These are known as the Elkton Shops and Yard, or the Geneva Avenue Shops. Spur track connections from the Southern Pacific Company's lines at Elkton station are maintained so that material may be delivered by rail from any point. At these shops all of the heavy overhauling and rehabilitation work is done on the Company's rolling stock and other equipment; furthermore, such cars as the Company has constructed have been built there. The facilities consist of blacksmith, woodworking, truck, machine, and paint shops. A yard for the care and handling of maintenance of way materials and certain stores is provided in connection with the shops.

Another yard is maintained at the junction of Valencia Street and Market Street where a considerable amount of maintenance of way material, particularly track special work, is stored and handled.

The general store of the Company is housed at Eleventh and Bryant Streets in the building which housed the Company's former steam power plant.

The headquarters for the electric line department is on Fillmore Street, just south of Turk Street, adjacent to the Company's substation property.

The Company maintains ten houses and one yard for the storage, inspection, lubrication, repair, and cleaning of electric cars as listed in Table V.

TABLE V.

LOCATIONS AND CAPACITIES OF CAR HOUSES

Location	Car Capacity Indoors	Outdoors
Geneva Car House		
San Jose Avenue and Geneva Avenue	80	17
Mission Car House		
Mission Street near Twenty-ninth Street	67	4
Valencia Car House		
Valencia Street and Twenty-eighth Street	24	59
Twenty-fourth—Utah Car House		
Twenty-fourth and Utah Streets	102	....
Third—Twenty-third Car House		
Third Street near Twenty-third Street	39	70
Turk—Fillmore Car House		
Fillmore Street at Turk Street	55	8
McAllister Car House		
McAllister Street at Central Avenue	29	53
Sutro Car House		
Thirty-third Avenue at Clement Street	36	73
Haight Street Car House		
Haight Street near Stanyan Street	27	....
Oak—Broderick Car House		
Oak Street at Broderick Street	35	....
Lincoln Way—Funston Yard		
Lincoln Way, Funston—Thirteenth Avenue and Irving Street	....	110
	490	394
Grand Total		884

Cable car houses are maintained at the following locatons:

	Car Capacity Indoors	Outdoors
Pacific Avenue between Polk Street and Van Ness Avenue	6	..
Mason Street between Washington and Jackson Streets	60	23
Castro Street south of Twenty-fourth Street	24	....
	90	23
Grand Total		113

The locations of these pieces of property are all shown on the map which also shows substations, 11 kv. transmission lines and underground conduit owned by the railway.

Power Supply

The power used by the Company is furnished by the Pacific Gas and Electric Company in the form of alternating current at 11,000 volts, 3 phase, 60 cycles. The Company's substations for converting this energy to 600 volts direct current with their capacities are given in Table VI.

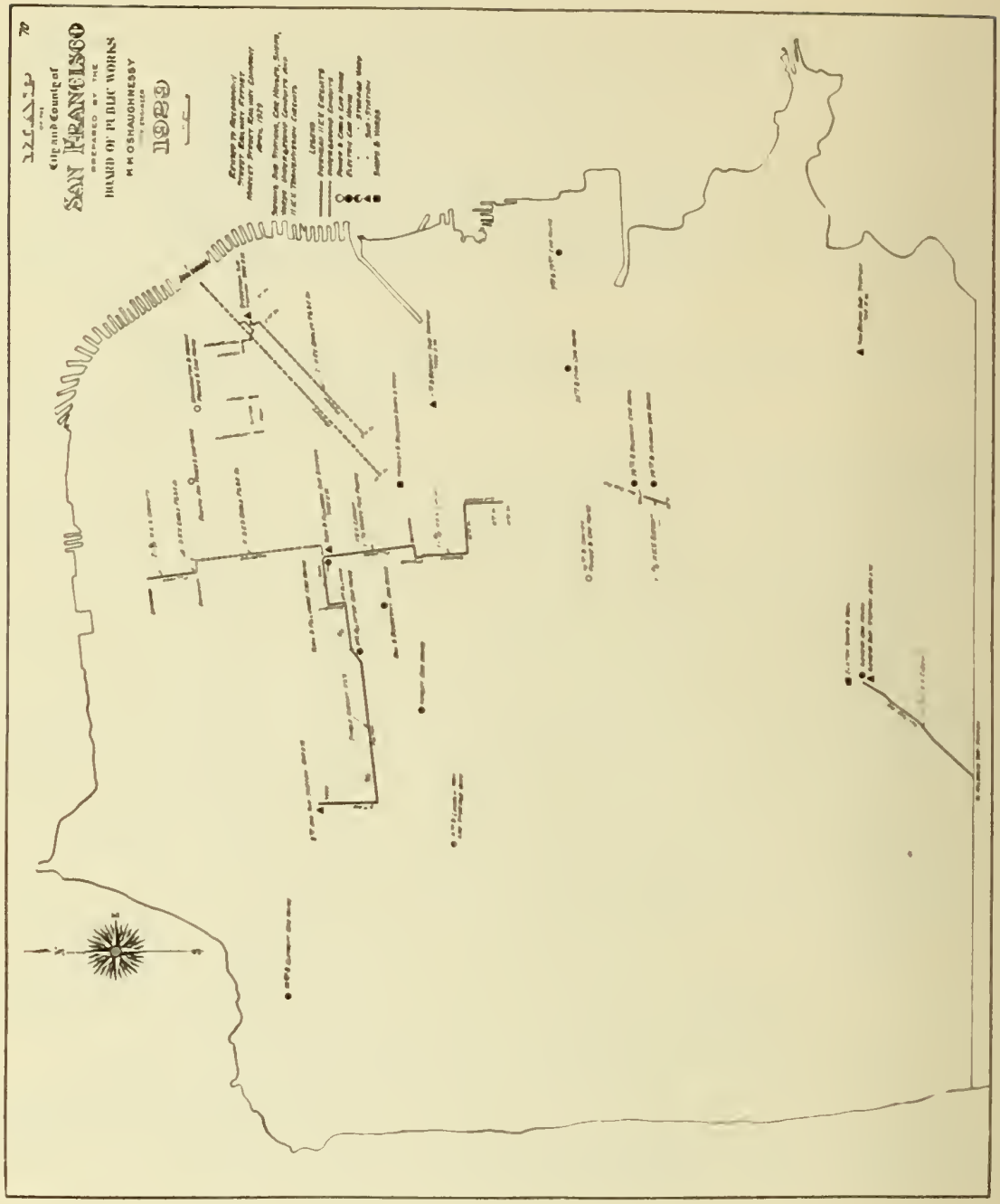


TABLE VI.

LOCATION AND CAPACITY OF SUBSTATIONS

Location	Capacity, kw.	Type
The Geneva Avenue Shops	4,500	M.G.
Eleventh and Bryant Streets	7,500	M.G.
Turk and Fillmore Streets	7,500	M.G.
Eighth Avenue between Geary and Anza Streets	5,000	Conv.
Stevenson Street between First and Second Streets	7,000	Conv.
San Bruno Avenue near Ordway Street	750	Conv.
Millbrae (San Mateo County)	2,500	M.G.
Total	34,750	

All of these stations, with the exception of the one on San Bruno Avenue, are attended stations equipped with motor generator sets or synchronous converters as indicated in the tabulation above. The station on San Bruno Avenue is a new automatic synchronous converter substation.

On June 30, 1928, the Pacific Gas and Electric Company's Bay Shore Substation contained 600 volt apparatus with a capacity of 800 kw. As this has since been removed it has not been included in the above list.

The cable operated lines are driven by electric motors also taking power from the Pacific Gas and Electric Company. These power stations are located at the car storage barns already listed under the cable lines.

For a number of years following 1910, the United Railroad lines were supplied with power from the Sierra and San Francisco Power Company which was owned by the same organization controlling the railway. Later the demand for power exceeded the capacity of the Sierra and San Francisco Power Company and 4,000 kilowatts were purchased from the Great Western Power Company. Since January, 1920, the Pacific Gas and Electric Company has supplied all of the energy required by the railway. This was brought about through the lease followed by the acquisition of the Sierra and San Francisco Power Company's property by the Pacific Gas and Electric Company.

The A. C. power purchased is delivered to the substations by 11,000 volt transmission lines, some of which belong to the railway company and some to the power company. With the exception of a few short lines radiating from the Second and Stevenson Street Station and for a short distance on Sutter Street where underground lead covered cable is used, all of the Company's 600 volt feeder system is overhead.

The relatively small number of substations, as compared with the mileage of the system, requires the carrying of 600 volt energy for a considerable distance. This necessitates very heavy copper conductors and results at peak hours in rather excessive voltage drops on the outer ends of some of the lines.

The 11,000 volt power is purchased from the Pacific Gas and Electric Company under existing Rate Schedule P-9, which provides for a rate of eight and one-half mills per kilowatt per hour for the first three hundred kilowatt hours per month per kilowatt of maximum demand, and seven and one-half mills per kilowatt hour for all energy over three hundred kilowatt hours per month per kilowatt of maximum demand. The net result is that the Company pays in the neighborhood of eight mills per kilowatt hour for the A. C. power which it purchases. During the year 1928 the railway purchased 156,300,000 kilowatt hours.

The map, page 30, shows the incomplete system of 11,000 volt circuits belonging to the railway. Without considerable capital expenditure it would be impossible to supply power to the stations from any other than the present source.

Difficulty was experienced in ascertaining the ownership of some of the substation equipment, part of which originally belonged to the railway and part to the old Sierra and San Francisco Power Company. It is evident, however, that the rectifying units are owned as shown by Table VII.

Thirteen of the motor generator sets are of 1500 kw. capacity consisting of an 11,000 volt, 3 phase, 60 cycle motor and a 600 volt direct current generator, direct connected. These were purchased by the Sierra Company in 1909 and installed in 1910.

The synchronous converters at Eighth Avenue are two of 1500 kw. capacity and one of 2000 kw. capacity. One of the 1500 kw. machines was installed at Washington and Mason in 1914 and moved to its present location in 1921. The

other was purchased and installed in 1915. The large unit was purchased and installed in 1924.

TABLE VII.

OWNERSHIP OF SUBSTATION RECTIFYING UNITS.

Station	Market St. Ry. Co. No.	Market St. Ry. Co. Capacity kw.	Pacific G. & E. Co. No.	Pacific G. & E. Co. Capacity kw.
Eleventh and Bryant	1	1500	4	6000
Turk and Fillmore	.	....	5	7500
Eighth Avenue	3	5000	.	....
Geneva Avenue	.	....	3	4500
Stevenson Street	3	7000	.	....
San Bruno Avenue	1	750	.	....
Millbrae	.	....	3	2500
Totals	8	14250	15	20500
Percentage		41%		59%

Total Number of Machines 23
Total Kilowatt Capacity 34750

At the Stevenson Street Station there are two 2000 kw. synchronous converters which were purchased for the original installation in 1921 and one 3000 kw. converter purchased in 1924.

The San Bruno Avenue Station, which contains one automatically controlled 750 kw. synchronous converter, was erected in 1927. The engineering work for this station was done by the Byllesby Company from its Chicago office.

Cars

The Market Street Railway Company's electric cars are of twenty different types and the cable cars of eight different types. The twelve suburban electric cars have a seating capacity of fifty-six. The seating capacity of the City cars is twenty-six passengers on single truck, and forty-four, forty-six, forty-eight, fifty or fifty-two passengers on the double truck types.

The single truck cars weigh approximately 22,000 pounds and the double truck cars weigh from 34,000 to 54,000 pounds. All of the double truck cars have four motors, the single truck cars two motors.

All of the electric cars are of the rear entrance pre-payment type using fare boxes and have a portion which is not entirely closed, making them a modified form of the so-called "California" type. Smoking is permitted in the open sections.

The cable cars have an average seating capacity of thirty and an average weight of 12,000 pounds. They are of the California type, one section being open and the other enclosed. In the open section the passengers face outwardly from the center of the car. Passengers enter and leave cars from both sides, a feature no longer considered good practice but not objectionable on the lines on which they are used.

The twelve suburban cars were originally operated on the San Mateo line, being purchased in 1906. For several years past these cars have not been used, their place having been taken in the San Mateo service by a much lighter car. The cars are in condition to be used and might be used in emergency. As the Company has not seen fit to use them, it hardly seems that the City in case of acquiring the system would find it desirable to purchase this equipment.

There are almost 3000 electric motors in the passenger car service of which only 664 are of a modern type. Of these 320 were purchased with the 100 class cars in 1911, 260 with the 201-265 class cars in 1913, four in 1915 and 80 with the 266-285 class cars in 1920. All of the other motors are of types which are obsolete and which have not been made for many years. The largest group comprises 1127

General Electric 1000 motors rated at 35 horse power on 550 volts. The Company claims to be getting very good results out of these motors. A great many of these are second-hand motors which have been picked up as they were being discarded by other companies. This type of motor was in use under the old Union Street cars of the Municipal Railway, and when the old cars were abandoned the motors were purchased by the Market Street Railway Company.

Outside of the large suburban cars all cars are equipped with Type K control with only a few classes having the wiring in metal conduit.

For the year 1928 the cost of maintenance of electrical equipment of cars, I. C. C. Account 33, was for the Market Street Company 0.73 cents per car mile and 6.61 cents per car hour as compared with the Municipal Railway's costs of 0.31 cents and 3.00 cents respectively, in spite of the higher wage scale in the Muncipal Railway Shops. The reproduction cost new of the electrical equipment of the cars is $3,820,706, thus showing that it would be very expensive to replace the old equipment with new in order to bring the maintenance expenses to a figure comparable with the City's costs.

In spite of the fact that the organization has been working with a handicap of obsolete electrical equipment, they have a very good record as to the number of "pull-ins" on account of failures on the line.

The standard color of the cars is green with white ends, which are illuminated at night, this feature being patented by the Company. The white color and illumination is used for the purpose of increasing visibility and thus reducing the accident hazard.

During the past few years a very large number of the cars have been fitted with spring cushion, leather upholstered seats, with a view to attracting additional patronage. The Byllesby organization has made a special effort to advertise and make its service attractive and has in general been very successful. There is no question that the general appearance and comfort of the cars in San Francisco compare favorably with those of the cities throughout the United States.

Service

The Company at the present time is operating forty-six car routes and three bus routes. The attached map (Frontispiece) shows the routes of all of the street car and bus lines operating within the City of San Francisco. The routes of the Market Street Railway are numbered, while those of the Municipal Railway are lettered. Letters and numbers adjacent to the lines indicate the routes as far as they are so designated. Some of the Market Street Railway car routes are not numbered and none of the bus routes are numbered. All of the Municipal Railway car routes are lettered, but none of the bus routes.

TABLE VIII.

MARKET STREET RAILWAY COMPANY TRAFFIC STATISTICS

1918-1928 Inclusive.

Year	Car Miles Operated	Car Hours Operated	Car Miles Per Car Hour
1918	24,740,601	2,820,122	8.77
1919	25,503,852	2,911,182	8.77
1920	25,631,908	2,899,444	8.84
1921	25,154,273	2,819,388	8.92
1922	25,092,130	2,792,923	8.98
1923	25,391,329	2,831,324	8.97
1924	25,768,581	2,867,781	8.99
1925	25,807,751	2,879,716	8.96
1926	26,572,515	2,959,505	8.98
1927	26,666,192	2,978,282	8.95
1928	26,764,838	2,967,228	9.02

In the Appendix will be found a complete listing of all the present routes now operated by the three systems.

The number of car miles operated, the car hours operated and passengers carried from 1918 to 1928 inclusive are shown on Tables VIII and IX. A chart, shown below, has been made to show the number of revenue passengers per car mile; a previous chart shows the car miles per annum.

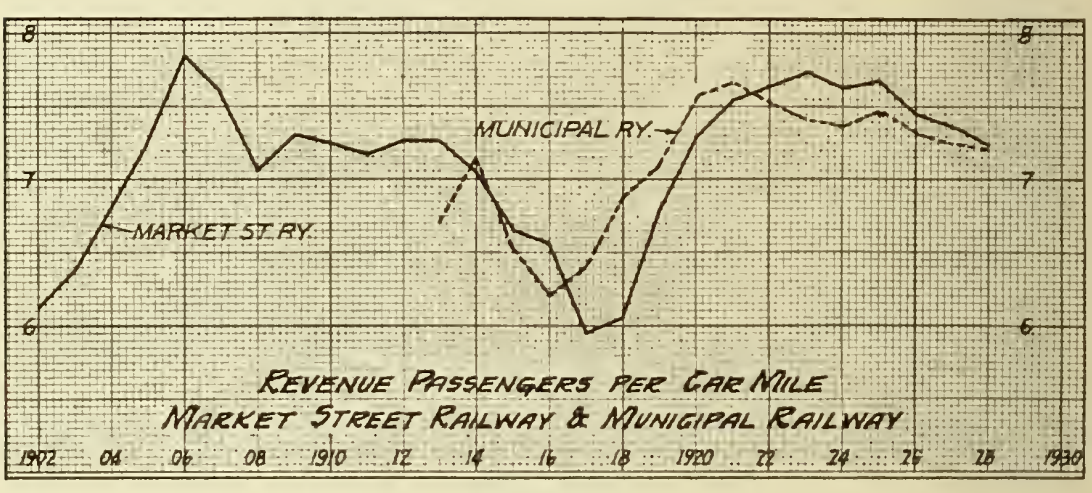


TABLE IX.

MARKET STREET RAILWAY—NUMBER OF PASSENGERS 1918-1929

Year	Revenue	Transfer	Revenue and Transfers	Free
1918	149,730,366	51,481,436	201,211,802	549,396
1919	172,245,218	56,981,602	229,226,820	596,400
1920	186,535,863	60,492,292	247,028,155	586,818
1921	188,819,289	61,397,521	250,171,810	613,530
1922	191,924,926	62,196,248	254,121,174	602,890
1923	196,515,450	63,761,055	260,276,505	583,736
1924	197,375,624	64,994,165	262,369,789	593,497
1925	198,277,586	66,263,248	264,540,834	549,033
1926	198,030,769	67,828,853	265,059,622	503,394
1927	196,555,997	67,111,448	263,667,445	518,073
1928	193,766,598	67,782,415	261,549,013	451,184

Table X, in two sheets, shows the service operated by each line of the Market Street Company, being divided into trolley lines, cable lines, and motor coach lines. In addition to showing the number of car miles and car hours, there is also shown the percentage of the total of each. The lines are arranged in order of the number of car miles, while the right-hand column shows their order on the basis of the number of car hours operated.

Transfers

The Market Street Railway issues free transfers between all of its lines, limiting the riding on a single fare to one general direction. In other words, a single five cent fare will give the passenger a ride from one part of the city to another, but will not allow him to ride so as to double back to a point close to his original starting point, thus preventing round trip riding for a single fare. Free transfers are issued between electric cars and buses and between electric and cable cars.

The Company has been very liberal with its transfer privileges and any restrictions imposed are not such as to be burdensome or inconvenient for the average user. Approximately twenty-six percent of the total number of passengers use transfers. The average daily number of riders is 715,000 of which approximately 188,000 are transfer passengers.

TABLE X.

MARKET STREET RAILWAY COMPANY. SERVICE OPERATED BY LINES—1928.

Line TROLLEY	Car Miles	% of Total	Car Hours	% of Total	Order of Car Hours
McAllister	1,794,663	7.08	184,980	6.70	1
San Mateo	1,501,498	5.92	96,629	3.50	8
Valencia	1,229,376	4.85	138,744	5.04	3
Haight and Ocean	1,151,369	4.54	115,629	4.19	6
Fillmore	1,106,183	4.36	149,339	5.41	2
Sutter and Clement	1,103,319	4.35	113,532	4.12	7
Masonic	1,023,496	4.04	120,247	4.36	5
Third and Kearny	1,006,280	3.97	121,578	4.41	4
Haight and Ingleside	909,917	3.59	94,125	3.41	11
Sutter and California	894,521	3.53	95,726	3.47	9
Turk and Eddy	880,672	3.48	92,662	3.36	12
Ingleside	880,275	3.47	79,730	2.89	17
Hayes	793,524	3.13	92,013	3.34	13
Market	784,739	3.10	94,283	3.42	10
Mission and 24th	775,670	3.06	86,864	3.15	16
Ellis and O'Farrell	765,129	3.02	87,111	3.20	15
Mission	744,862	2.94	69,969	2.54	18
Ninth and Polk	682,257	2.69	88,562	3.21	14
Third	664,210	2.62	60,248	2.51	20
San Bruno	654,239	2.58	68,089	2.47	21
Mission and Richmond	627,430	2.48	69,622	2.53	19
Guerrero	582,323	2.30	58,527	2.12	23
Sutter and Jackson	552,231	2.18	67,568	2.45	22
Daly City	485,978	1.92	48,536	1.76	25
Glen Park	482,918	1.90	51,434	1.86	24
Howard	447,017	1.76	47,796	1.73	28
Eighteenth	431,628	1.70	47,170	1.71	27
Fillmore and Valencia	412,482	1.63	45,845	1.66	28
Folsom	350,806	1.38	37,698	1.36	30
Bryant	309,708	1.22	39,163	1.42	29
Eighth and Army	309,145	1.22	34,227	1.24	31
Hayes and Oak	277,891	1.10	33,458	1.21	32
Sixth and Sansome	202,673	.80	31,925	1.16	33
Harrison	167,310	.66	22,953	.83	35
Fillmore Hill	142,521	.56	28,073	1.02	34
Visitacion	110,370	.43	12,054	.44	36
First and Fifth	30,527	.12	4,516	.16	38
Bosworth	24,843	.10	4,398	.16	39
Tenth and Post	24,242	.09	3,632	.13	40
Divisadero	20,142	.08	7,163	.26	37
Second and Market	13,158	.05	2,628	.09	41
Total	25,351,542	100.00	2,757,446	100.00	
% Grand Total		94.72		92.94	

Line CABLE	Car Miles	% of Total	Car Hours	% of Total
Jackson	351,204	30.55	54,657	30.10
Sacramento	334,355	29.21	49,750	27.40
Powell	243,020	21.22	40,883	22.52
Castro	147,224	12.86	25,924	14.26
Pacific	70,664	6.16	10,388	5.72
Total	1,146,467	100.00	181,602	100.00
% Grand Total		4.28		6.12

TABLE X—Continued

MARKET STREET RAILWAY COMPANY.
SERVICE OPERATED BY LINES—1928.

MOTOR COACH				
Crocker-Amazon	116,660	43.85	13,146	47.29
San Bruno	102,179	38.40	9,873	35.40
Excelsior	47,160	17.75	4,856	17.40
Total	265,999	100.00	27,875	100.00
% Grand Total		1.00		.94
Charter Cars	830		305	
Grand Total	26,764,838	100.00	2,967,228	100.00

Inter-system transfers between the Municipal Railway and the Market Street Railway, without additional cost to the passengers, are exchanged at the following points:

Geary Street and Divisadero Street

Inbound Municipal to southbound No. 4 or No. 24. Outbound Municipal to northbound No. 4 or No. 24 and southbound No. 24.

Geary Street and Fillmore Street

All cars—all directions.

Stockton Street and Market Street

Transfers are interchanged between the Municipal "F" line and the Market Street Railway No. 20 line to and from Fourth Street and the Southern Pacific Station.

Union Street and Fillmore Street

Transfers in both directions on both lines. At this point the Market Street Company has tried to secure an agreement giving them three cents for transfers which they collect and the Municipal lines two cents per transfer.

Sloat and Junipero Serra Boulevards

Inbound No. 12 cars to inbound "K" cars. Outbound "K" cars to outbound No. 12 cars.

Transfers between the Market Street Railway and the California Street Cable Railroad are exchanged as follows:

California Street and Presidio Avenue and
California Street and Divisadero Street

Inbound Market Street cars to inbound California Street cars. Outbound California Street cars to outbound Market Street cars.

Organization

The personnel of the Market Street Railway Company as of Dectmber 31, 1928, consisted of:

General	
General Officers	6
General Office Clerks	152
Maintenance of Way and Structures	
Superintendents	2
Other Employees	278
Maintenance of Equipment	
Superintendents	1
Other Employees	466
Power	
Superintendents	2
Other Employees	62
Transportation	
Superintendents	1
Other Employees	1881
Total	2851

More detail as to the further division of these employees by departments or occupations is given in Table XI while the form of the organization is shown on the chart.

TABLE XI.

MARKET STREET RAILWAY COMPANY EMPLOYEES. BY DEPARTMENTS—APRIL, 1929.

	Employees
President's Office	
Office Employees	4
Transportation Department	
Vice President's Office	14
Supt. of Transportation Office	15
Division Superintendents	7
Dispatchers	28
Inspectors	29
Platform Men	1862
Miscellaneous	63
Construction and Maintenance Department	
Vice President's Office	11
Line Department	36
Substations	35
Cable Department	29
Car Houses	204
Shops	236
Track	271
Secretary's Office	
Office Employees	35
Legal Department	
Office Employees	32
Treasurer's Office	
Office Employees	14
Purchasing Department	
Office and Storehouse Employees	27

The aggregate salaries and wages paid during the year 1928 were $5,303,102.00.

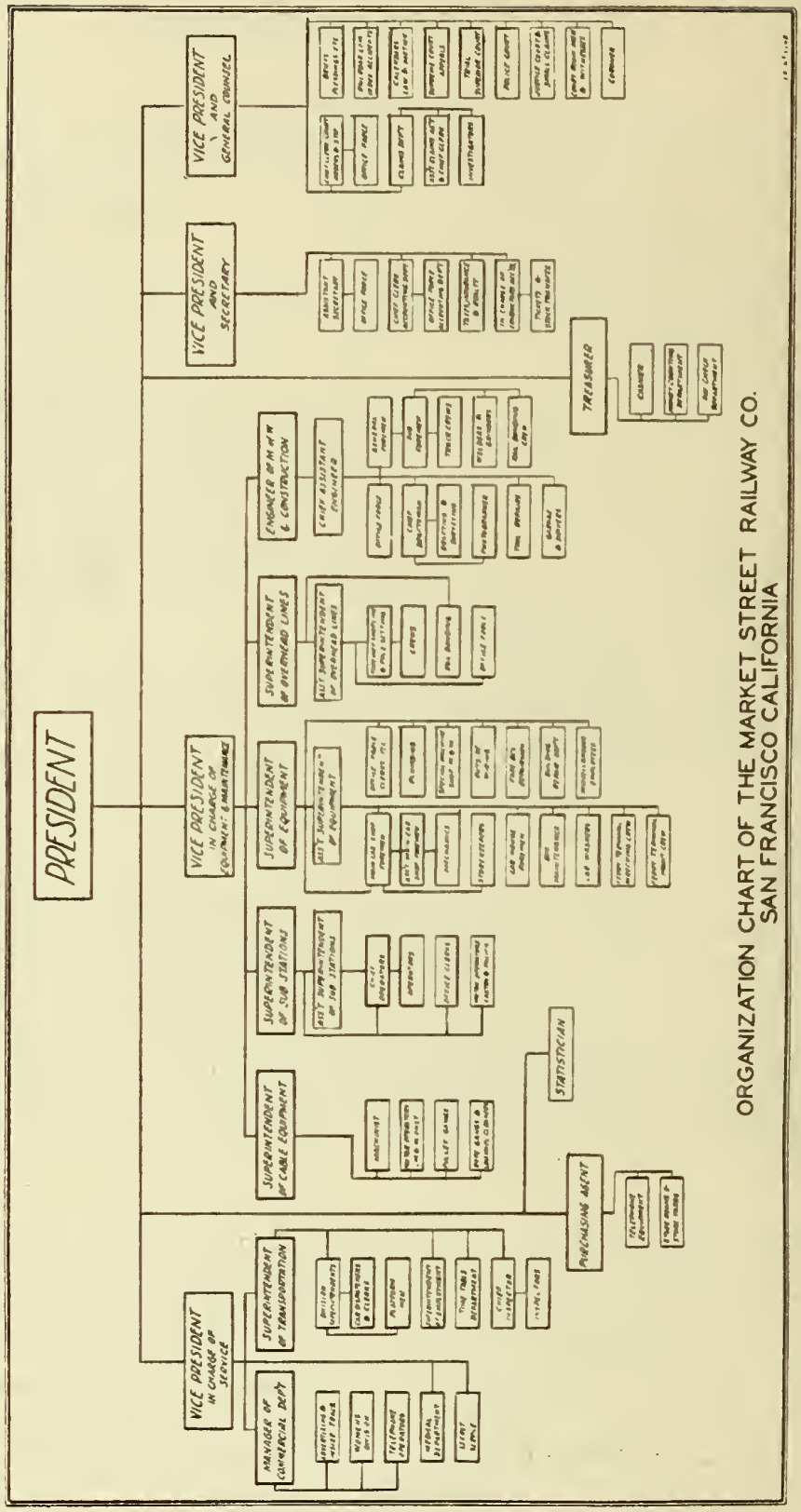
With a few exceptions those in authority have been with the system for many years. The same applies to other employees, a number of whom have been with the Market Street Railway, or its predecessors, since the days when the horse-cars were operated.

There have been two strikes of platform employees, one in 1907 and the other in 1917. The effect of these shows very markedly on the curves of operating and expense data. At the present time the employees are not organized. The spirit prevailing among the employees apparently is very good, reflecting credit on the management.

Offices

The head offices of the Company are located in the Holbrook Building, at 58 Sutter Street, where the President, the Vice-Presidents and Treasurer have their offices. The Engineering and Accounting Departments are also located in the same building, while the mechanical department offices are at the Geneva Avenue Shop. The office of the power division is in the car barn at Turk and Fillmore Streets, and the line department headquarters are across the street on Fillmore Street near Turk. The store department is located at Eleventh and Bryant Streets.

The Company maintains a medical department and cares for injured or sick employees at the St. Francis Hospital, where it maintains several beds and gives most excellent service.


PRESIDENT
VICE PRESIDENT AND GENERAL COUNSEL
VICE PRESIDENT AND SECRETARY
VICE PRESIDENT IN CHARGE OF CONSTRUCTION & MAINTENANCE
VICE PRESIDENT IN CHARGE OF SERVICE
TREASURER
SUPERINTENDENT OF EQUIPMENT
SUPERINTENDENT OF SUB STATIONS
SUPERINTENDENT OF CABLE EQUIPMENT
SUPERINTENDENT OF TRANSPORTATION
SUPERINTENDENT OF OVERHEAD LINES
ENGINEER OF WAY & CONSTRUCTION
MANAGER OF COMMERCIAL DEPT
PURCHASING AGENT
STATISTICIAN
ORGANIZATION CHART OF THE MARKET STREET RAILWAY CO.
SAN FRANCISCO CALIFORNIA

CHAPTER V.

FINANCIAL RESULTS OF PRESENT OPERATION OF THE MARKET STREET RAILWAY.

In this section of the report the assets and liabilities of the Market Street Railway Company are shown in considerable detail together with the income, profit and loss resulting from the operation. An analysis is also made of the revenue, and details of operating expenses are set forth and discussed. In addition to considering the results of the year 1928, charts and tables are presented, making comparison with the previous years. Some of the curves extend from 1900, others from dates almost as far back. On account of the volume of the tabular data, it has been necessary to limit this to the past ten years, or from 1919 to 1928 inclusive. The years 1917 and 1918 are not representative years on account of the strike of 1917. That these years are not normal is very clearly shown in the curves.

Balance Sheet

Table XII shows the balance sheets for the years 1927 and 1928 in parallel columns. The various items are discussed in detail for the purpose of clearly setting forth the actual meaning of this statement.

TABLE XII.

MARKET STREET RAILWAY COMPANY.
CORPORATION BALANCE SHEETS FOR YEARS 1927 AND 1928.
ASSETS

Item	Investments	Dec. 31,1927	Dec. 31, 1928
1.	Road and Equipment	$47,607,942.98	$47,552,512.69
2.	Sinking Fund	154,470.77	165,274.33
3.	Investments Affiliated Cos.		
	(a) Stocks	13,505.00	13,505.00
	(c) Notes	16.700.00	16,700.00
4.	Other Investments		
	(a) Stocks	1.00	1.00
	(b) Bonds	23,297.00	23,297.00
5.	Total Investments	$47,815,916.75	$47,771,290.02
	Current Assets		
6.	Cash	446,675.72	387,158.75
7.	Special Deposits	420.00	300.00
8.	Loans and Notes Receivable	692.35	1,557.35
9.	Miscellaneous Accounts Receivable	85,131.56	93,484.50
10.	Materials and Supplies	478,343.61	402,530.89
11.	Interest, Dividends and Rents Receivable	863.50	2,805.68
12.	Total Current Assets	$ 1,012,126.74	$ 887,837.17
13.	Preferred Assets	11,668.08	72,777.92
	Unadjusted Debits		
14.	Rents and Insurance in Advance	27,342.71	21,618.57
15.	Discount on Funded Debt	607,297.57	526,443.84
16.	Other Unadjusted Debits	8,248.94	3,263.60
17.	Total Unadjusted Debits	$ 642,889.22	$ 551,326.01
18.	**Grand Total**	**$49,482,600.79**	**$49,283,231.12**

LIABILITIES

19.	Capital Stock		$31,926,450.00	$31,926,450.00
20.	Funded Debt			
	Book Liabilities	$13,000,000		
	Company's Holdings	2,634,000	11,001,500.00	10,366,000.00
	Current Liabilities			
21.	Audited Accounts and Wages Payable		218,405.96	375,489.91
22.	Matured Interest and Rents Unpaid		208,780.00	196,911.25
23.	Total Current Liabilities		$ 427,185.96	$ 572,401.16
24.	Deferred Liabilities		85,647.16	64,619.63
	Unadjusted Credits			
25.	Tax Liability		262,236.53	276,366.06
26.	Operating Reserves		123,231.98	90,047.13
27.	Accrued Depreciation		2,128,547.60	2,551,764.59
28.	Other Unadjusted Credits		101,007.57	95,521.83
29.	Total Unadjusted Credits		$ 2,615,023.68	$ 3,013,699.60
	Corporate Surplus			
30.	Profit and Loss		3,426,793.99	3,340,060.67
31.	**Grand Total**		**$49,482,600.79**	**$49,283,231.12**

Assets

Item No. 1—Road and Equipment—shows the book value of the property as of the last day of the year. Details as to how this valuation is made up are not available. This figure, however, is the one which may be compared with the reproduction cost new of other valuations quoted in this report. This figure has no particular significance other than representing what the Company is carrying on its books as the value of the property. It has been arrived at through setting up on the books the purchase prices of the separate properties consolidated, adding from year to year the cost of additions and betterments and deducting the estimated cost of retirements. During the year 1928 this account decreased $55,430.29, which is the net difference between additions and betterments of $214,566.80 and retirements of $269,997.09. The additions and betterments, as well as the retirements are largely in the equipment account to which the costs of new cars and their electrical equipment are charged as additions and from which the book value of cars retired amounting to $256,580.00 is deducted.

Item No. 2—Sinking Fund—increased during the year by $10,803.56, which is the net result of the year's transactions required by the deed of trust, securing the mortgage on the seven per cent sinking fund gold bonds which the Company was allowed to issue by order of the Railroad Commission set forth in detail hereinbefore. These transactions involve additons to the fund, by income from the investment fund $570.86, cash appropriations to the fund $500,000.00, other additons to the fund $144,275.83, amounting to $644,846.69 total additions. Withdrawals from the fund during the year for purchase of bonds amounted to $634,043.13, leaving a net balance in the fund at the close of the year of $165,274.33.

Item No. 3 shows first the Company's investment in stock of affiliated companies amounting to $13,505.00 detailed as follows:

South San Francisco Railway & Power Co.	$13,500.00
Sutter Street Railroad Co.	1.00
Sutro Railroad Co.	1.00
The San Francisco & San Mateo Electric Railway Co.	1.00
Meropolitan Railway Co.	1.00
Gough Street Railroad Co.	1.00
	$13,505.00

The notes, amounting to $16,700.00 are those of the South San Francisco Railroad and Power Company. ,

Item No. 4 is investments in other than affiliated companies, amounting to a total of $23,298.00. This is largely in United States Government Liberty Loan Bonds bearing four and one-quarter per cent interest.

Item No. 5 is the total investments.

Of the current assets Item No. 6 shows the cash on hand, which is the Company's day to day balance.

Items Nos. 7, 8 and 9 are small miscellaneous accounts not calling for special comment.

Item No. 10—Materials and Supplies—represents stocks of construction and repair material, which are reasonable and necessary for the Company to keep on hand. During the year there was written off obsolete material to the amount of $15,345.44.

Item No. 11—Interest, Dividends and Rents Receivable—requires no comment.

Item No. 13—Deferred Assets—likewise Item No. 14, Rents and Insurance in Advance—are self-explanatory.

Item No. 15—Discount on Funded Debt—is the remaining difference between the selling price and the par value of the $13,000,000.00 worth of 7% bonds which were sold at ninety-three. This amount is being decreased each year. In the year 1928 the total reduction was $80,853.73, of which $32,876.38 was a debit item under "Profit and Loss," and $47,977.35 was a deduction from the gross income.

Item No. 16—Unadjusted Debits—consists of three small items, the largest of which covers a portion of the cost of the valuation made in 1926 by the Byllesby Company.

Item No. 18 gives the grand total of the Company's assets, amounting to $49,283,231.12, on December 31, 1928, or $199,369.67 less than in 1927.

Liabilities

Item No. 19 covers the Company's capital stock amounting to $31,926,450.00 This stock is divided as follows

6% Cumulative Prior Preference	$11,618,500.00
6% Cumulative Preferred	4,986,850.00
6% Non-Cumulative Second Preferred	4,673,700.00
Common	10,647,400.00

No dividends have ever been paid on any of this stock with the exception of the regular dividend on the Prior Preference Stock which was paid from April 1, 1922, to January 1, 1924. On this the unpaid accumulations as of January 1, 1929, were forty and one-half per cent. On the 6% Cumulative Preferred the accumulations on the same date were forty-six and one-half per cent. The present value of these stocks will be discussed under values.

Item No. 20—Funded Debt—covers the amount of the Company's indebtedness, which is covered by bonds. As previously indicated, the Company has been authorized by the Railroad Commission to issue $13,000,000.00 of seven per cent bonds. and as set forth in detail on page 8. During the year $635,500.00 of these bonds $2,634,000.00 were being held by the Company. These bonds are being taken up by the Company year by year as required by the deed of trust securing the mortgage, and as set forth in detail on page 20. During the year $635,500.00 of these bonds were acquired by the company.

Item No. 21—Audited Accounts and Wages Payable—covers the audited but not paid current indebtedness of the Company.

Item No. 22 likewise covers current interest and rents unpaid.

Item No. 24 covers several miscellaneous deferred liabilities.

Item No. 25—Tax Liability—is self-explanatory.

Item No. 26—Operative Reserves—covers the balance of a fund accumulated between 1921 and 1926, through the operating accounts, under the title of "Depreciation of Way and Structures, Equipment, and Power Plant Buildings and Equipment." The $90,047.18 shown as a liability is divided between reserves for insurance, cable replacements, renewals, and legal expense, approximately $64,000.00 being in the insurance reserve.

Item No. 27—Accrued Depreciation—shows an increase during the year of $423,216.44. This account was credited with $500,000.00 set up as a debit under "Profit and Loss" and debited with retirements to the extent of $76,783.01. This amount set up as "Accrued Depreciation" is not held as cash or securities but represents part of the investment in roadway equipment.

Item No. 28—Unadjusted Credits—consists of three items, namely:

Unpaid crossing repair bills rendered by the Municipal Railway	$38,435.33
Money received from the City on account for the property on Frederick Street between Arguello Boulevard and Willard Street now occupied by the Kezar Stadium	46,500.00
Liability for tickets purchased but not yet used	10,586.50

Item No. 30—Profit and Loss—this represents the accumulated book surplus and shows a decrease of $86,733.32 since 1927.

Item No. 31 is the grand total of the liabilties which balances the grand total of the assets.

Income Statement

Table XIII shows the Income Statement of the Market Street Railway and United Railroads from 1919 to 1928 inclusive. The details of this statement are as follows:

Item No. 1—Railway Operating Revenue—shows the amount of money received on account of railway operations, the major portion being fares collected. A small amount comes from advertising and rentals which for the year 1928 amounted to $85,474.07. Special car revenue collected was $602.60. The total of these three items amounts to under one per cent of the total revenue. This account is presented more fully later in this chapter.

Item No. 2—Railway Operating Expenses—covers all expenditures for the maintenance of track, structures and cars, the furnishing of power, the cost of conducting transportation, advertising, and general expenses, the details of which are set forth in another table.

Item No. 3 is the net operating revenue or the difference between railway operating revenues and railway operating expenses.

TABLE XIII.

INCOME STATEMENT.

	I. Operating Income	1928	1927	1926	1925
1.	Railway Operating Revenues	$9,754,460.74	$9,819,570.38	$9,891,667.63	$9,902,768.28
2.	Railway Operating Expenses	7,746,612.82	7,640,858.07	7,393,705.25	7,053,040.09
3.	Net Operating Revenue	$2,007,847.92	$2,178,712.31	$2,497,962.38	$2,849,728.19
4.	Taxes Assignable to Railway Operation	607,000.00	605,000.00	617,000.00	617,000.00
5.	Operating Income	1,400,847.92	1,573,712.31	1,880,962.38	2,232,728.19
6.	II. Non-Operating Income	25,924.80	40,881.15	53,453.64	51,062.33
7.	Gross Income	$1,426,772.72	$1,614,593.46	$1,934,416.02	$2,283,790.52
	III. Deductions from Gross Income				
8.	Rent for Leased Roads				
9.	Miscellaneous Rents				
10.	Miscellaneous Taxes	5,117.37	5,132.03	5,640.60	4,232.84
11.	Interest in Funded Debt	743,553.94	790,532.61	845,147.82	882,509.40
12.	Interest on Unfunded Debt	346.13	125.64	7,035.54	26,366.22
13.	Amortization Discount on Funded Debt	47,977.35	50,611.82	53,113.02	55,482.12
14.	Miscellaneous Debits	.....	10,033.08	10,516.65	10,564.28
15.	Total Deductions	$ 796,994.79	$ 856,435.18	$ 921,453.63	$ 979,154.86
16.	Income Balance to Profit and Loss	$ 629,777.93	$ 758,158.28	$1,012,962.39	$1,304,635.66

TABLE XIII (Continued).

INCOME STATEMENT.

	I. Operating Income	1924	1923	1922
1.	Railway Operating Revenues	$9,852,360.43	$9,809,392.98	$9,583,436.86
2.	Railway Operating Expenses	7,036,208.24	6,834,188.44	6,860,037.72
3.	Net Operating Revenue	$2,816,152.19	$2,975,204.54	$2,723,399.14
4.	Taxes Assignable to Railway Operation	617,000.00	617,100.00	604,200.00
5.	Operating Income	$2,199,152.19	$2,358,104.54	$2,119,199.14
6.	II. Non-Operating Income	36,558.70	74,553.85	51,490.08.
7.	Gross Income	$2,235,710.89	$2,432,658.39	$2,170,689.22
	III. Deductions from Gross Income			
8.	Rent for Leased Roads			46.00
9.	Miscellaneous Rents			
10.	Miscellaneous Taxes	4,752.50	5,036.97	6,431.08
11.	Interest in Funded Debt	857,756.80	727,456.19	745,892.99
12.	Interest on Unfunded Debt	956.32	95.21	299.43
13.	Amortization Discount on Funded Debt			
14.	Miscellaneous Debits	51.94	20.67	
15.	Total Deductions	$ 863,517.56	$ 732,609.04	$ 752,669.50
16.	Income Balance to Profit and Loss	$1,372,193.33	$1,700,049.35	$1,418,019.72

TABLE XIII (Continued).

INCOME STATEMENT.

	I. Operating Income	1921	1920	1919
1.	Railway Operating Revenues	$9,435,061.36	$9,328,174.42	$8,629,347.00
2.	Railway Operating Expenses	7,053.777.62	6,691,891.55	6,106,149.65
3.	Net Operating Revenue	$2,381,283.74	$2,636,282.87	$2,523,197.35
4.	Taxes Assignable to Railway Operation	597,500.00	551,300.00	468,800.00
5.	Operating Income	$1,783,783.74	$2,084,982.87	$2,054,397.35
6.	**II. Non-Operating Income**	88,600.58	226,478.09	175,584.14
7.	Gross Income	$1,872,384.32	$2,311,460.96	$2,229,981.49
	III. Deductions from Gross Income			
8.	Rent for Leased Roads	55,746.90	229,314.97	228,200.00
9.	Miscellaneous Rents	3,673.17	3,000.00	3,000.00
10.	Miscellaneous Taxes	6,621.88	6,600.00	6,300.00
11.	Interest in Funded Debt	994,001.28	1,661,788.32	1,681,310.63
12.	Interest on Unfunded Debt	34,920.68	137,536.78	137,829.90
13.	Amortization Discount on Funded Debt			
14.	Miscellaneous Debits	840.69	4.18	
15.	Total Deductions	$1,095,804.60	$2,038,244.25	$2,056,640.53
16.	Income Balance to Profit and Loss	$ 776,579.72	$ 273,216.71	$ 173,340.96

Item No. 4 is taxes assignable to railway operations and covers state tax on gross receipts, municipal franchise taxes, car licenses and federal income tax.

Item No. 5 is operating income or net operating revenue less taxes.

Item No. 6 is non-operating income and consists of miscellaneous rent income and income from securities, sinking fund and other reserves.

Item No. 7 is gross income, being operating income plus non-operating income.

Items Nos. 8, 9, 10, 11 and 12 are self-explanatory.

Item No. 13—Amortization of Discount on Funded Debt. This is a portion of the amount used in amortizing the discount on the funded debt, which was set up under Item No. 15 on the balance sheet.

Item No. 14—Miscellaneous Debits—covers miscellaneous small items. No charge was made during the year 1928.

Item No. 15 is the total of the deductions from gross income.

Item No. 16—Income Balance to Profit and Loss—is the difference between Item No. 15 and gross income. This income balance is carried forward to the Profit and Loss account.

In order that a more intelligent picture of the railway's income may be gained, Table XIV, entitled "Comparative Statement of Operating Revenue, Expenses, Taxes and Income" is presented. This shows the total railway operating revenue, railway operating expense, net revenue from railway operations, taxes, and operating income from 1920 to 1928 inclusive. Following the amounts is a column of ratios showing the relation to the 1920 figure. This indicates that while the railway operating revenue increased from 100% in 1920 to 106.2% in 1925 and dropped again to 104.5% in 1928, that the operating income increased from 100% in 1920 to 107.1% in 1925, and has dropped to 67.2% in 1928. The explanation

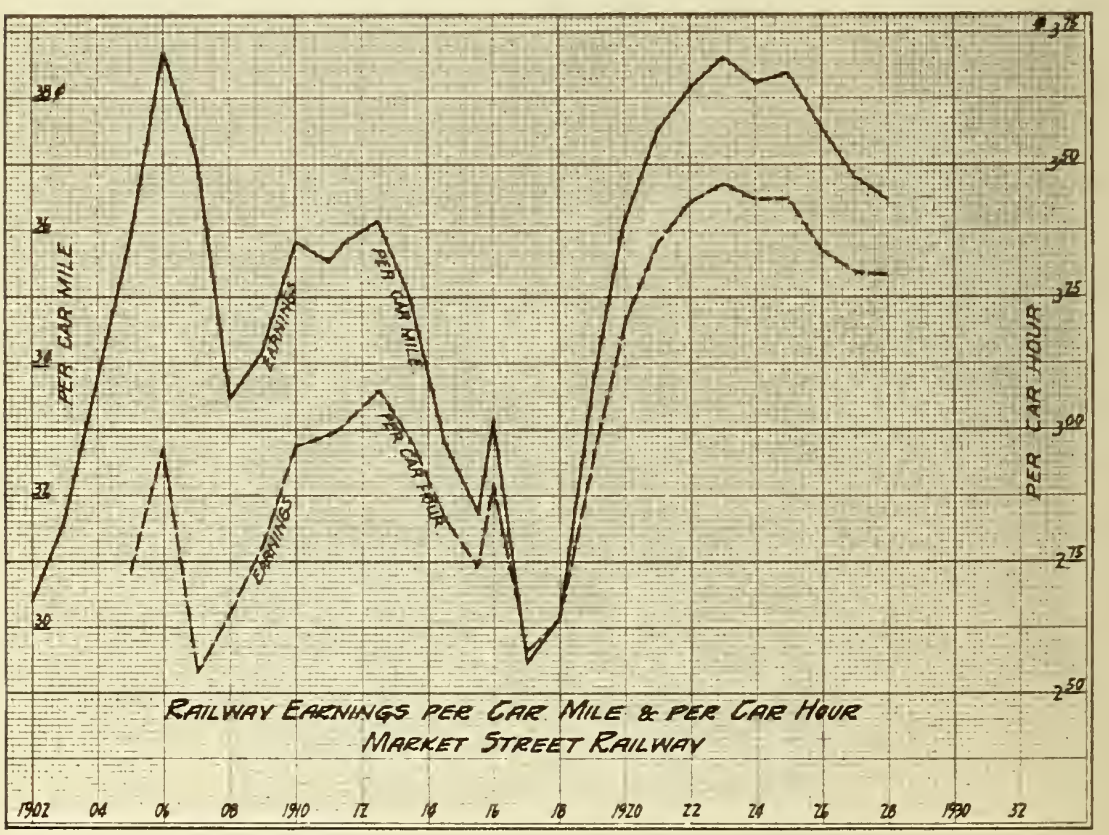


TABLE XIV.

MARKET STREET RAILWAY COMPANY

COMPARATIVE STATEMENT OF OPERATING REVENUE, EXPENSES, TAXES AND INCOME

1920 TO 1928

Year	Railway Operating Revenue	Ratio to 1920	Railway Operating Expenses	Ratio to 1920	Net Revenue Railway Operations	Ratio to 1920	Taxes	Ratio to 1920	Operating Income	Ratio to 1920
1920	$9,328,174.42	100.0	$6,691,891.55	100.0	$2,636,282.87	100.0	$551,300	100.0	$2,084,982.87	100.0
1921	9,435,061.36	101.2	7,053,777.62	105.4	2,381,283.74	90.3	597,500	108.4	1,783,783.74	85.6
1922	9,583,436.86	102.7	6,860,037.72	102.5	2,723,399.14	103.3	604,200	109.6	2,119,199.14	101.6
1923	9,809,392.98	105.2	6,834,188.44	102.1	2,975,204.54	112.7	617,100	111.9	2,358,104.54	113.1
1924	9,852,360.43	105.6	7,036,208.24	105.2	2,816,152.19	106.8	617,000	111.9	2,199,152.19	105.5
1925	9,902,768.28	106.2	7,053,040.09	105.4	2,849,728.19	108.1	617,000	111.9	2,232,728.19	107.1
1926	9,891,667.63	106.0	7,393,705.25	110.5	2,497,962.38	94.8	617,000	111.9	1,880,962.38	90.2
1927	9,819,570.38	105.3	7,640,858.07	114.2	2,178,712.31	82.6	605,000	109.7	1,573,712.31	75.5
1928	9,754,460.74	104.5	7,746,612.82	115.8	2,007,847.92	76.2	607,000	110.1	1,400,847.92	67.2

for this may be seen in the progressive increase in railway operating expenses from 1920 to 1928 with the exception of the years 1922 and 1923, which were lower than the preceding year of 1921.

Taxes show an increase from 1920 to 1923, after which they remain stationary until 1927 when they dropped 2.2% and in 1928 rose 0.4%, so that in 1928 they stood 10.1% higher than in 1920.

Revenue

Under this section are presented more details as to the railway operating revenue than were given under the analysis of the income statement. This data is more or less voluminous and can be presented best in the form of tabulations and charts.

The first of these is a chart showing the railway operating earnings per car mile and per car hour from 1902 to 1928 inclusive, which brings out very clearly the pronounced changes which have occurred during this period. Receipts per car hour show fluctuation of from two dollars and fifty-five cents to three dollars and seventy cents between 1917 and 1923. Since 1923 there has been a rapid falling off in the revenue—both per car hour and per car mile.

Table XV shows the same data in tabular form and in addition the number of revenue passengers per car mile for both the Market Street and Municipal Systems.

TABLE XV.

MARKET STREET RAILWAY.

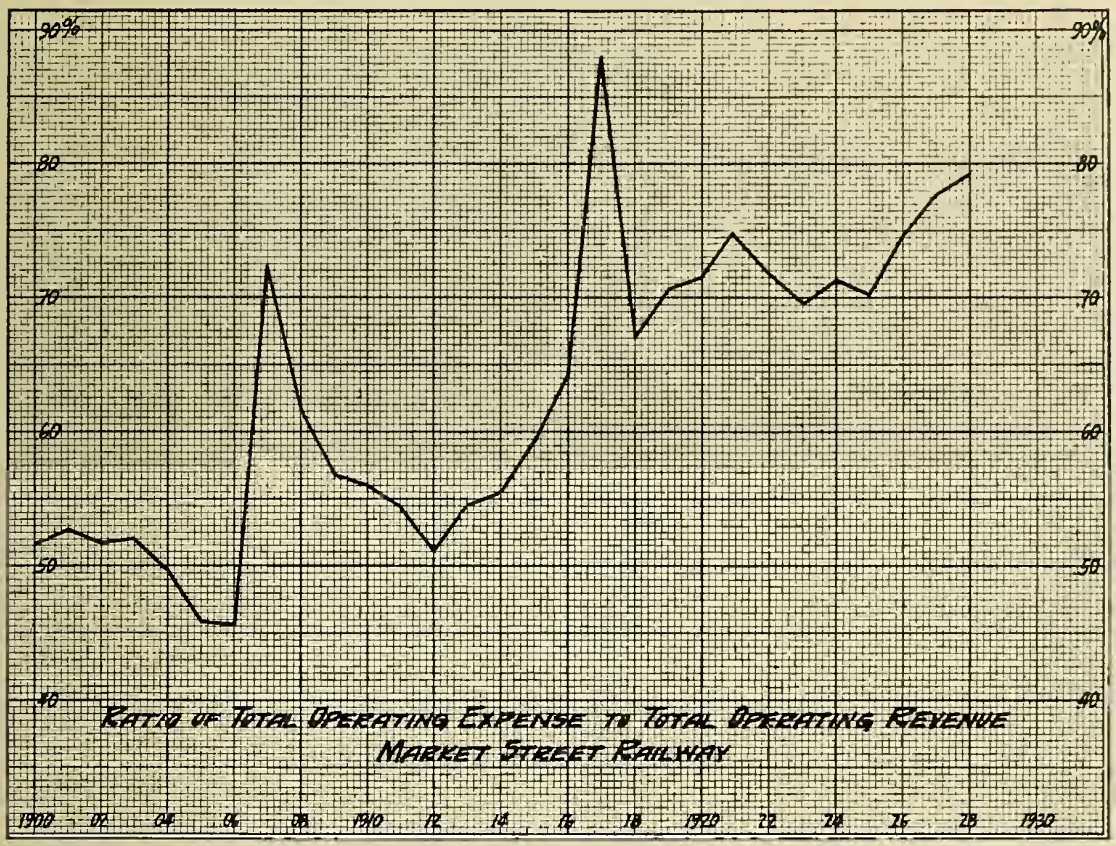
REVENUE PER CAR MILE AND PER CAR HOUR AND REVENUE PASSENGERS PER CAR MILE.

	Revenue		Revenue Passengers Per Car Mile	
Year	Cents Per Car Mile	Dollars Per Car Hour	Market St. Ry.	Municipal Railway
1920	36.392	3.217	7.2775	7.5626
1921	37.509	3.317	7.5064	7.6726
1922	38.193	3.431	7.6488	7.5435
1923	38.633	3.465	7.7395	7.4242
1924	38.234	3.436	7.6302	7.3825
1925	38.371	3.439	7.6829	7.4816
1926	37.564	3.342	7.4524	7.3180
1927	36.824	3.297	7.3710	7.2531
1928	36.445	3.287	7.2396	7.2141

The next chart shows the ratio of operating expenses to operating revenue, or the operating ratio. This shows that the general trend has been an increase since 1900. The two marked peaks are in years when there were strikes, and are just the reverse of the dips which occur in the curves showing earnings.

The above gives the detail of the system as a whole but does not give information by routes and in order to do this Table XVI "Operating Results by Lines" is presented

This shows car miles, car hours, operating expenses, net revenue, taxes, and the net after taxes for each line of the system arranged in the order of the number of car miles operated during the year 1928. In order to prepare this table it was necessary to estimate the operating expenses and taxes applicable to each line. In the last column which shows the net after deducting operating expenses and taxes from revenue, the figures marked with asterisks are deficits and indicate that twenty-four of the fifty trolley lines operated do not earn operating expenses and taxes. The McAllister Street Line is highest in point of net as well as in the



number of car miles operated. The next in order is the Valencia Street Line, closely followed by the Third and Kearny Line, and the Sutter and California Street Line.

The third column from the right shows the difference between revenue and operating expenses or net revenue and even in this column a large proportion of the lines show deficits. All of the cable lines, with the exception of the Castro and Pacific Avenue lines, show reasonable returns but none of the motor-coach routes produce revenue sufficient to meet operating expenses.

Table XVII, entitled "Market Street Railway Revenue per Car Mile and per Car Hour by Operated Routes for 1928" shows the trolley routes in the order of their earnings per car mile, followed by the revenue per car mile and the revenue per car hour, together with numbers indicating the order of earnings per car hour. Between the order of earnings per car mile and the order of earnings per car hour there is a marked difference.

While the earnings of the San Mateo Line are twenty-sixth on the car mile basis, they are first on the car hour basis, indicating very clearly the effect of increase in speed.

This table also shows that the length of route affects the revenue per car mile and per car hour as is evidenced from the showing made by the three Sutter Street lines—Sutter and Jackson being third, Sutter and California fifth, Sutter and Clement fifteenth in the order of earnings per car mile, or in inverse order to the length of line. The same thing is shown by the receipts per car mile for the Haight-Masonic, Haight-Ingleside, and Haight-Ocean lines, all of which operate over Haight Street. Masonic Avenue, the shortest, is twelfth on the list, the other two being twenty-second and twenty-third respectively.

OPERATING RESULTS BY LINES - 1928 (APPROXIMATE)

MARKET STREET RAILWAY COMPANY

TABLE XVI

TROLLEY ROUTES	1928 CAR MILES	1928 CAR HOURS	OPERATING EXPENSE EXCEPT CONDUCTING TRANSPORTATION @ 13.997¢ CAR MILE	CONDUCTING TRANSPORTATION @ $1.33007 CAR HOUR	TOTAL OPERATING EXPENSE	REVENUE	NET REVENUE	TAXES	NET AFTER TAXES
McAllister	1,754,663	164,980	$251,199	$246,037	$497,236	$723,016	$225,780	$45,890	$180,390
San Mateo	1,501,496	96,629	210,165	128,524	338,689	433,769	95,100	27,233	67,867
Valencia	1,229,376	136,744	172,076	184,539	356,615	525,534	168,919	32,992	135,927
Haight and Ocean	1,151,369	115,629	161,157	153,795	314,952	374,921	59,969	23,537	36,432
Fillmore and Sixteenth	1,106,183	149,339	154,832	198,632	353,464	471,944	118,480	29,626	88,852
Sutter and Clement	1,103,319	115,852	154,432	151,006	305,438	397,974	92,536	24,984	67,552
Masonic	1,023,496	120,247	143,259	159,937	303,196	384,756	81,562	24,155	57,407
Third and Kearny	1,006,260	121,578	140,849	161,708	302,557	465,809	163,252	29,243	134,009
Haight and Ingleside	909,917	94,125	127,361	125,193	252,554	300,162	47,628	18,845	28,763
Sutter and California	694,581	95,726	125,206	127,323	252,529	408,077	155,548	25,619	129,929
Turk and Eddy	880,672	92,662	123,268	123,247	246,515	305,070	58,555	19,152	39,403
Ingleside	860,275	79,730	123,212	106,047	229,259	237,263	8,004	14,895	6,891*
Hayes	793,524	92,013	111,069	122,364	233,458	348,948	115,495	21,907	93,588
Market	764,729	94,263	109,640	128,403	238,243	291,261	57,038	18,349	38,689
Mission and Twenty-fourth	775,570	66,864	108,571	115,535	224,106	325,362	101,256	20,426	80,830
Ellis and O'Farrell	765,129	87,111	107,095	115,864	222,959	313,784	90,825	19,699	71,126
Mission	744,562	69,969	104,268	93,064	197,322	263,908	66,586	16,568	50,018
Ninth and Polk	682,257	88,562	95,496	117,794	213,290	333,415	120,125	20,931	99,194
Third	664,210	69,248	92,969	92,105	185,074	220,683	35,609	13,854	21,755
San Bruno	654,239	68,069	91,575	90,563	182,138	185,934	3,796	11,673	7,877*
Mission and Richmond	627,430	69,622	87,821	92,602	180,423	178,325	2,098*	11,195	13,293*
Guerrero	562,323	58,527	81,509	77,845	159,354	139,317	20,037*	8,746	28,783*
Sutter and Jackson	552,231	67,568	77,296	69,870	147,166	256,090	65,924	16,077	72,847
Daly City and Cemeteries	465,978	48,536	68,013	64,557	132,560	175,306	42,726	11,005	31,721
Glen Park and Sunnyside	462,916	51,434	67,594	66,411	136,005	120,501	15,504*	9,565	25,069*
Howard	447,017	47,796	62,569	63,572	126,141	129,852	3,711	8,146	4,435*
Eighteenth and Park	421,618	47,170	60,415	62,739	123,154	95,007	28,147*	5,964	34,111*
Fillmore and Valencia	411,462	45,845	57,735	60,977	118,712	110,101	8,611*	6,912	15,523*
Folsom	380,606	37,698	49,102	50,141	99,243	98,801	442*	6,203	6,645*
Bryant	309,708	39,163	43,350	52,069	95,439	88,851	6,666*	5,559	12,447*
Eighth and Army	309,145	34,227	43,271	45,525	88,796	59,262	29,534*	3,720	33,254*
Hayes and Oak	277,551	33,458	38,896	44,501	83,397	94,887	11,490	5,957	5,533
Sixth and Sansome	202,673	31,925	28,368	42,462	70,830	68,699	2,131*	4,313	6,444*
Harrison	167,310	22,953	23,418	30,529	53,947	57,161	3,224	3,590	356*
Fillmore Hill	141,521	26,073	19,949	37,339	57,288	45,844	11,444*	2,878	14,322*
Visitacion	110,870	12,064	15,449	16,033	31,482	14,308	17,174*	898	18,072*
First and Fifth	30,527	4,816	4,273	6,007	10,280	6,006	3,474*	427	3,901*
Bosworth	24,643	4,398	3,478	5,850	9,328	2,124	7,204*	123	7,327*
Tenth and Post	24,242	3,632	3,313	6,881	8,224	910	7,314*	57	7,371*
Divisadero	20,142	7,163	2,620	9,527	12,347	910	11,437*	57	11,494*
Second and Market, S.P. Depot	13,158	2,628	1,942	3,416	5,338	8,739	3,401	549	2,852
Charter Cars	520	305	116	406	522	603	81	36	45
TOTAL - TROLLEY ROUTES	25,352,372	2,757,751	$3,548,576	$3,668,009	$7,216,586	$9,064,776	$1,846,191	$569,069	$1,279,122

* Deficit

CABLE ROUTES	1928 CAR MILES	1928 CAR HOURS	OPERATING EXPENSE EXCEPT CONDUCTING TRANSPORTATION @ 19.786¢ CAR MILE	CONDUCTING TRANSPORTATION @ $1.398 CAR HOUR	TOTAL OPERATING EXPENSE	REVENUE	NET REVENUE	TAXES	NET AFTER TAXES
Jackson	351,204	54,687	$69,310	$76,410	$145,720	$200,810	$55,090	$12,606	$42,484
Sacramento	334,853	49,750	65,965	69,521	135,536	152,112	16,576	9,549	7,027
Powell	243,020	40,863	47,960	57,154	105,114	154,248	49,134	9,653	39,481
Castro	147,224	25,924	29,055	36,242	65,297	50,637	14,660*	3,179	17,839*
Pacific	70,614	10,388	13,946	14,523	28,469	7,110	21,359*	446	21,805*
TOTAL - CABLE ROUTES	1,146,467	181,602	$226,256	$253,880	$480,136	$564,917	$84,781	$35,463	$49,316

MOTORCOACH ROUTES			@ 11.8532 CAR MILE	@ .65872 CAR HOUR					
Crocker Amazon	116,660	13,146	$13,628	$8,660	$22,488	$20,068	$2,420*	$1,260	$3,680*
San Bruno	102,179	9,673	12,111	6,504	18,615	13,325	5,290*	837	6,127*
Excelsior	47,160	4,856	2,590	6,196	8,786	5,901	2,887*	370	3,257*
TOTAL - MOTORCOACH ROUTES	263,999	27,675	$31,529	$16,362	$49,891	$39,294	$10,597*	$2,467	$13,064*
TOTAL - SYSTEM	26,764,828	2,967,228	$3,806,361	$3,940,251	$7,746,612	$9,668,987	$1,922,375	$606,999	$1,315,376

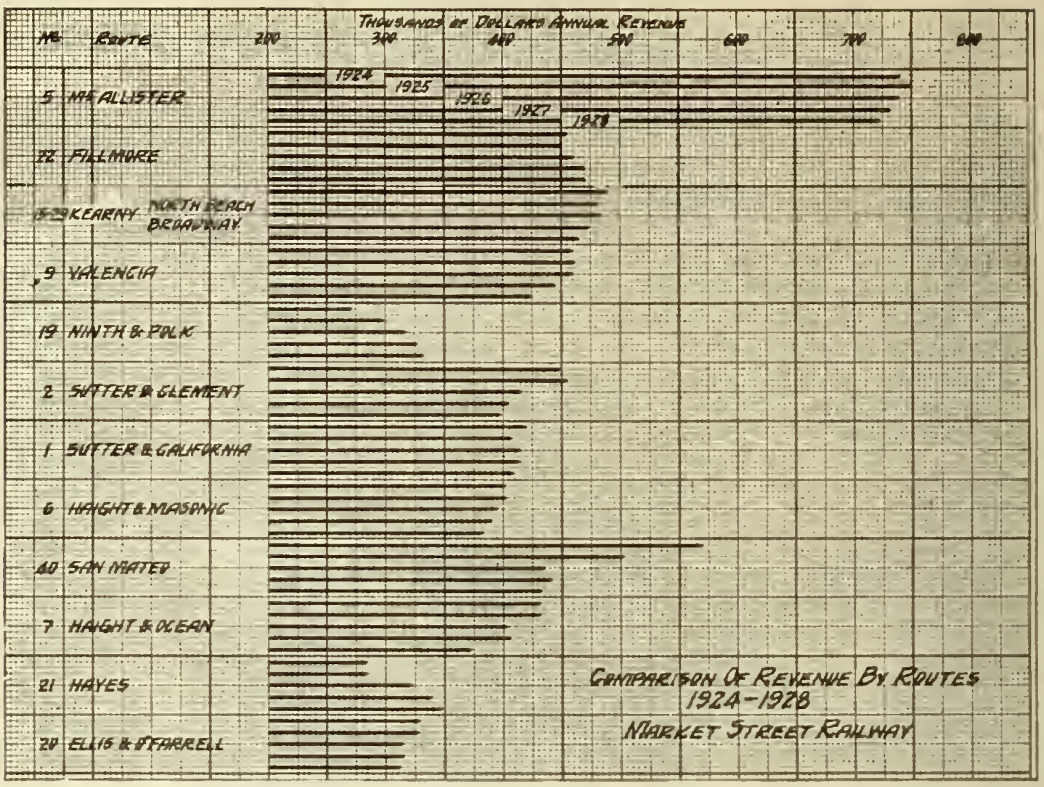
* Deficit

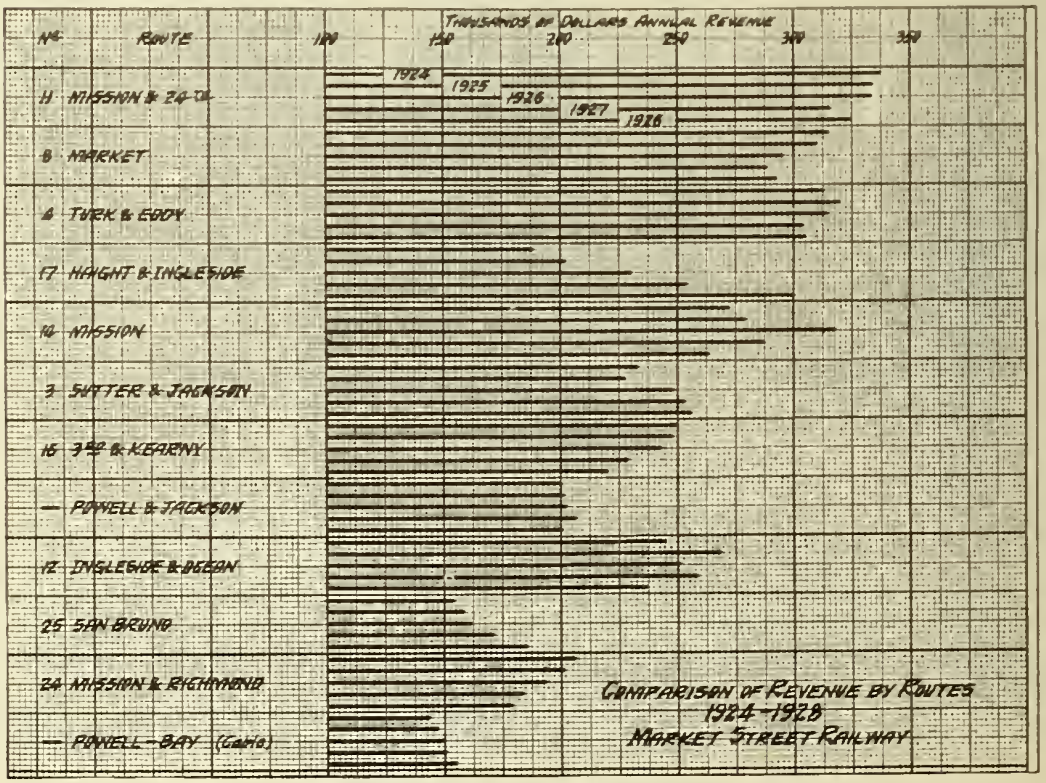
The following data has been compiled for the year 1928. It is of interest to see the trend of the lines over the past five years and in order to do this there are presented four graphs showing the comparison of revenues by routes from 1924 to 1928, the upper line in each case being the 1924 revenue for the route and the lower line the 1928 revenue. From this it can be seen at a glance that on most of the routes the revenue has been decreasing, although a few show increases, the most marked of these being the Ninth and Polk Street, Hayes Street, Haight-Ingleside, San Bruno, Fillmore Hill, and Daly City-Cemeteries Lines.

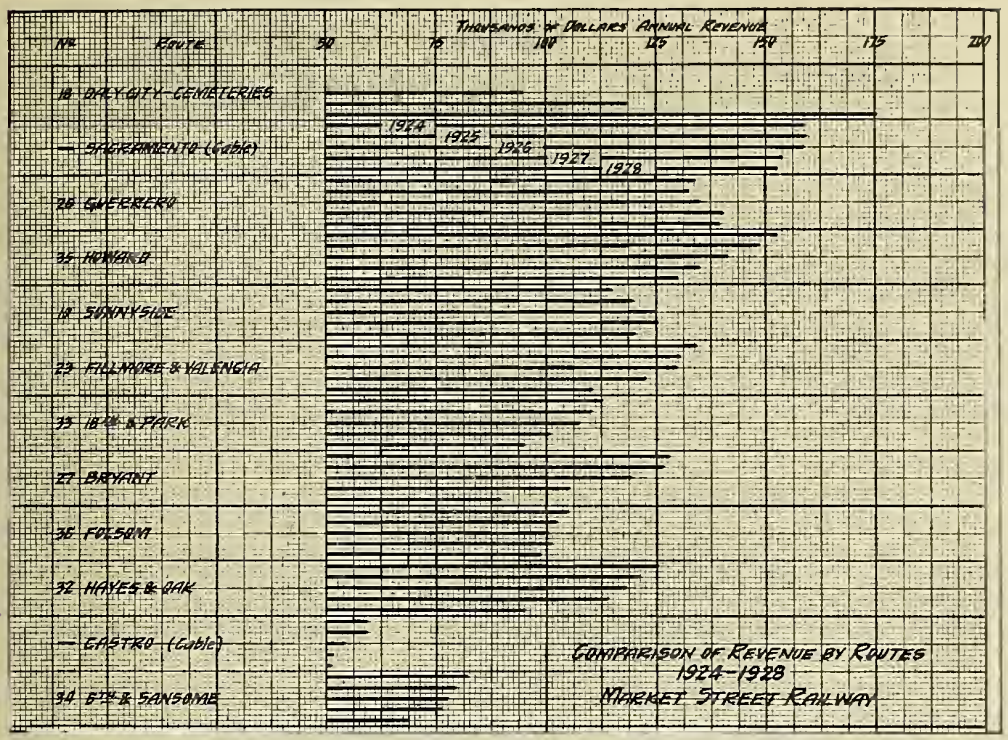
TABLE XVII.

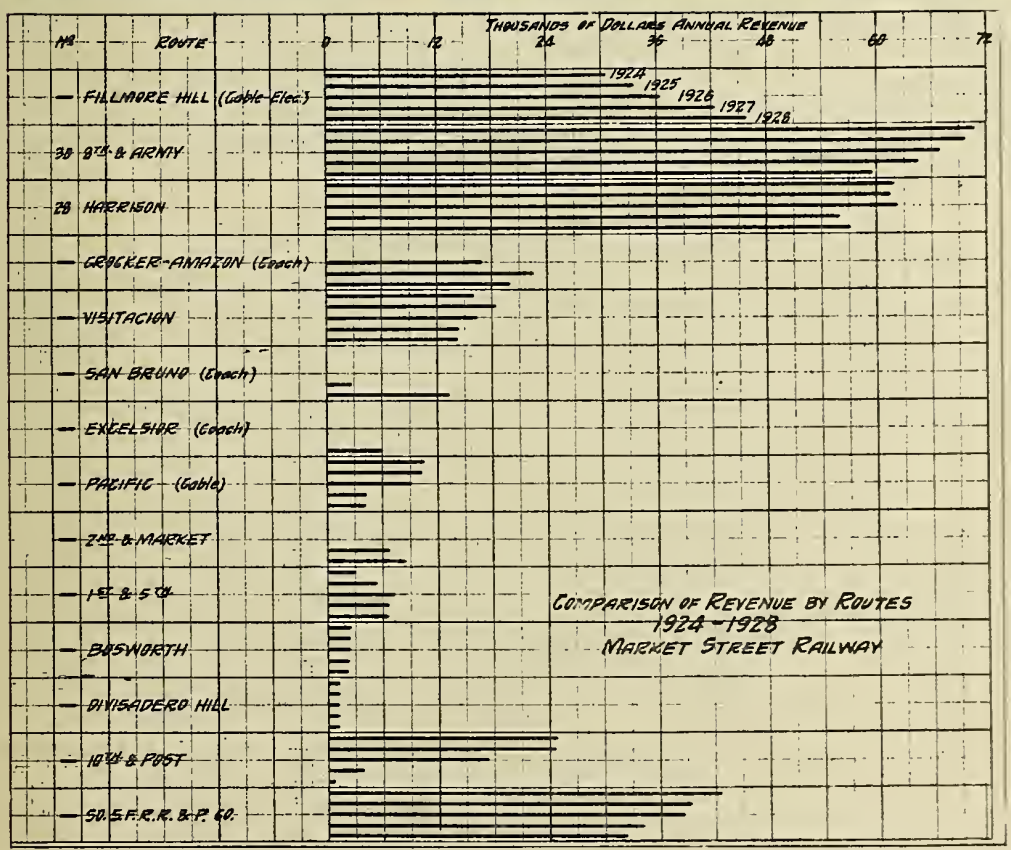
MARKET STREET RAILWAY REVENUE PER CAR MILE AND CAR HOUR BY OPERATED ROUTES—1928.

Route	Order of Earnings Per Car Mile	Revenue Per Car Mile	Revenue Per Car Hour	Order of Earnings Per Car Hour
TROLLEY ROUTES				
Second and Market	1	$0.66418	$3.3254	14
Ninth and Polk	2	.49869	3.7648	9
Sutter and Jackson	3	.46373	3.7901	6
Third and Kearny	4	.46290	3.8314	4
Sutter and California	5	.45620	4.2629	2
Hayes	6	.43974	3.7924	5
Valencia	7	.42748	3.7877	7
Fillmore	8	.42664	3.1602	20
Mission and 24th	9	.41946	3.7457	10
Ellis and O'Farrell	10	.41011	3.6021	12
McAllister	11	.40287	3.9086	3
Masonic	12	.37593	3.1997	17
Market	13	.37245	3.1000	21
Daly City and Cemeteries	14	.36073	3.6119	11
Sutter and Clement	15	.36071	3.5054	13
Mission	16	.35430	3.7717	8
Turk and Eddy	17	.34641	3.2923	15
Harrison	18	.34177	2.4912	28
Hayes and Oak	19	.34145	2.8359	23
Sixth and Sansome	20	.33896	2.1519	33
Third	21	.33225	3.1869	19
Haight and Ingleside	22	.32990	3.1892	18
Haight and Ocean	23	.32563	3.2424	16
Fillmore Hill	24	.32166	1.6330	36
Howard	25	.29049	2.7168	25
San Mateo	26	.28890	4.4892	1
Bryant	27	.28592	2.2611	32
Mission and Richmond	28	.28422	2.5613	27
San Bruno	29	.28420	2.7308	24
Folsom	30	.28164	2.6208	26
Ingleside	31	.26953	2.9758	22
Fillmore and Valencia	32	.26692	2.4016	29
Glen Park	33	.24953	2.3428	31
Guerrero	34	.23924	2.3803	30
First and Fifth	35	.22294	1.5070	37
Eighteenth	36	.22011	2.0141	34
Eighth and Army	37	.19169	1.7314	35
Visitacion	38	.12964	1.1870	38
Bosworth	39	.08550	.4830	39
Divisadero	40	.04517	.1270	41
Tenth and Post	41	.03754	.2501	40
Average for Trolley		**$0.35576**	**$3.2870**	
CABLE ROUTES				
Powell	1	$0.63471	$3.7729	
Jackson	2	.57178	3.6740	
Sacramento	3	.45494	3.0575	
Castro	4	.34394	1.9533	
Pacific	5	.10063	.6845	
Average for Cable		**$0.49275**	**$3.1107**	
MOTORCOACH ROUTES				
Crocker-Amazon Coach	1	.17202	1.5265	
San Bruno Coach	2	.13040	1.3495	
Excelsior	3	.12514	1.2153	
Average for Motorcoach		**$0.14772**	**$1.4097**	


No. Route
Thousands of Dollars Annual Revenue
200
300
400
500
600
700
800
1924
1925
1926
1927
1928
5 McALLISTER
22 FILLMORE
5-29 KEARNY NORTH BEACH BROADWAY
9 VALENCIA
19 NINTH & POLK
2 SUTTER & CLEMENT
1 SUTTER & CALIFORNIA
6 HAIGHT & MASONIC
40 SAN MATEO
7 HAIGHT & OCEAN
21 HAYES
20 ELLIS & O'FARRELL
Comparison Of Revenue By Routes
1924-1928
Market Street Railway

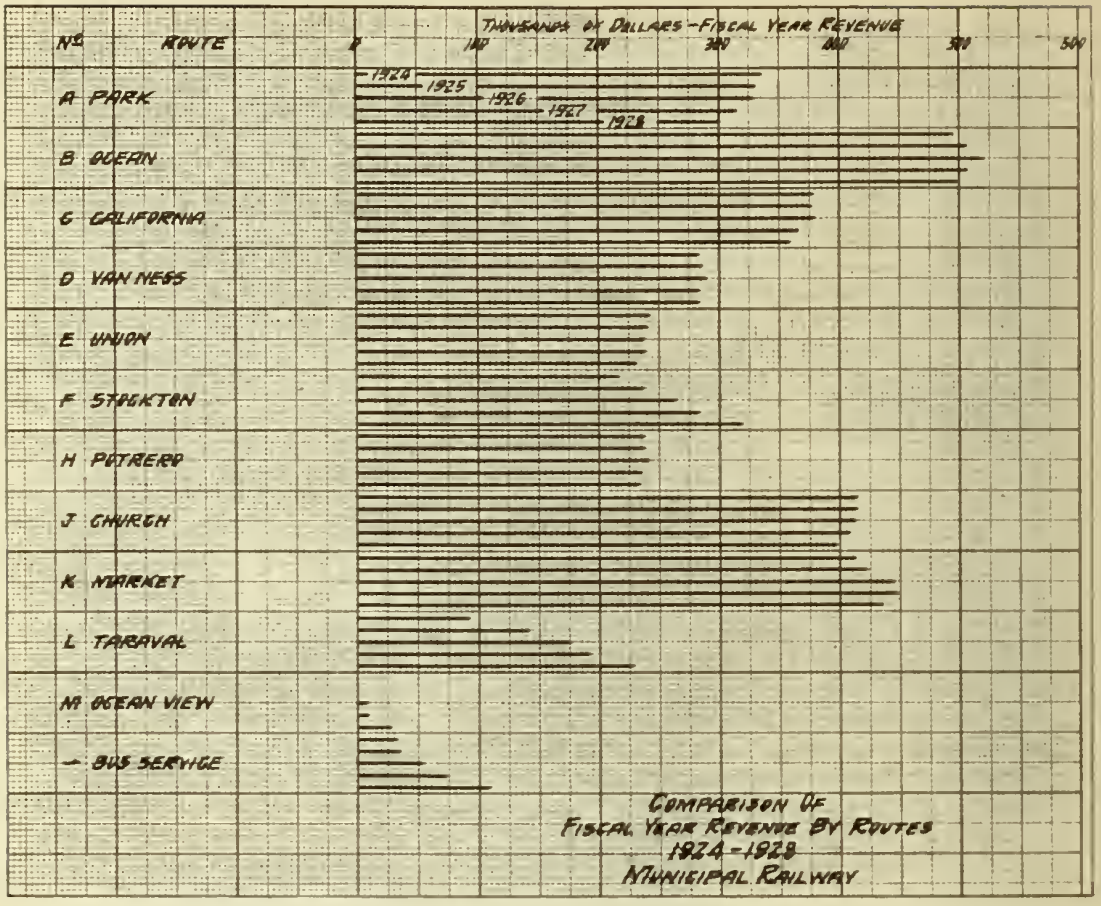

No. Route
Thousands of Dollars Annual Revenue
100
150
200
250
300
350
1924
1925
1926
1927
1928
11 MISSION & 24TH
8 MARKET
6 TURK & EDDY
17 HAIGHT & INGLESIDE
14 MISSION
3 SUTTER & JACKSON
16 3RD & KEARNY
— POWELL & JACKSON
12 INGLESIDE & OCEAN
25 SAN BRUNO
24 MISSION & RICHMOND
— POWELL - BAY (Cable)
Comparison of Revenue by Routes
1924-1928
Market Street Railway

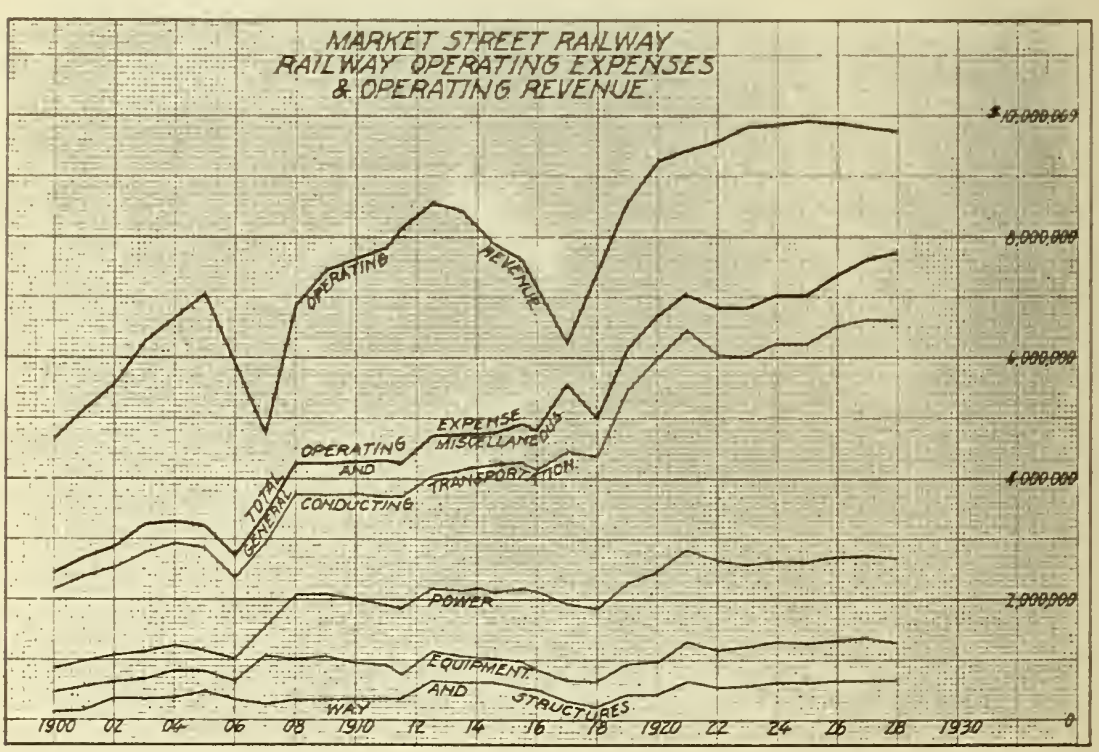


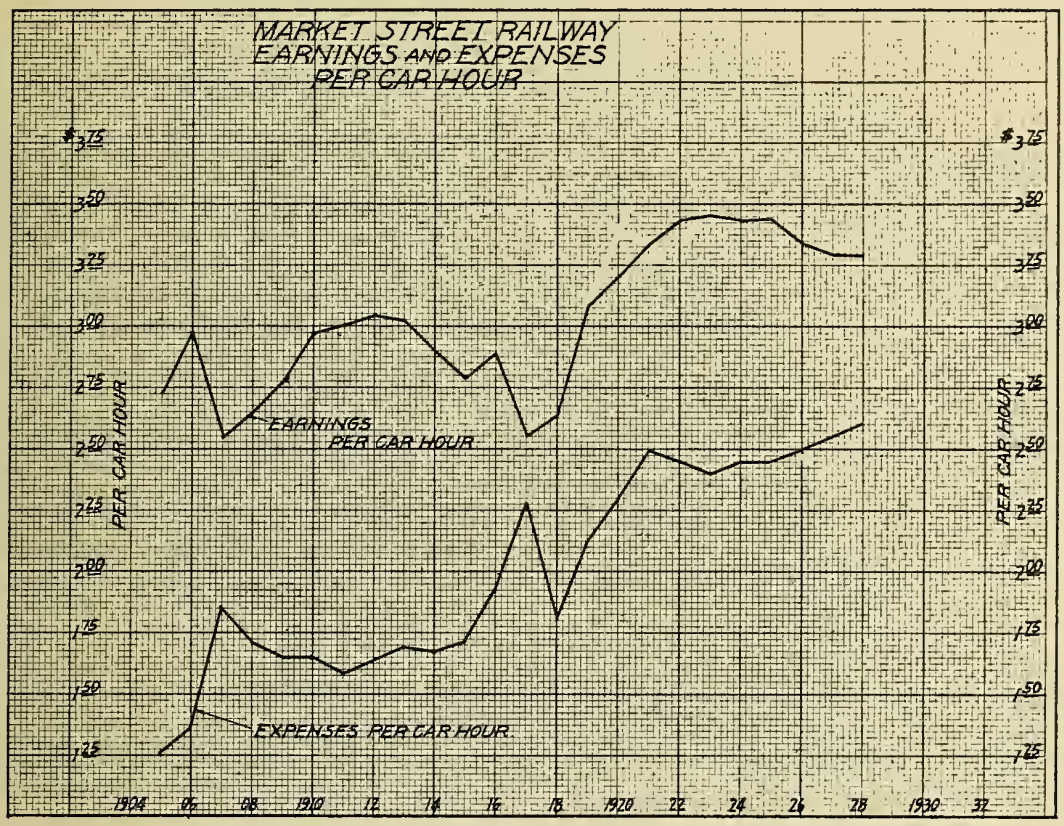


A marked falling off of revenue is to be noted on the Howard Street, Eighteenth and Park, Bryant Street, Hayes-Oak, and Tenth and Post Street Lines.

A similar graph is included showing the same data for the Municipal Railway lines. The most marked increases are on Stockton Street, Taraval Street and in the


No. ROUTE
THOUSANDS OF DOLLARS - FISCAL YEAR REVENUE
0
100
200
300
400
500
A PARK
1924
1925
1926
1927
1928
B OCEAN
C CALIFORNIA
D VAN NESS
E UNION
F STOCKTON
H POTRERO
J CHURCH
K MARKET
L TARAVAL
M OCEAN VIEW
— BUS SERVICE
COMPARISON OF
FISCAL YEAR REVENUE BY ROUTES
1924 - 1928
MUNICIPAL RAILWAY


MARKET STREET RAILWAY
RAILWAY OPERATING EXPENSES
& OPERATING REVENUE
$10,000,000
8,000,000
6,000,000
4,000,000
2,000,000
0
OPERATING REVENUE
TOTAL GENERAL
OPERATING AND CONDUCTING
EXPENSE MISCELLANEOUS
TRANSPORTATION
POWER
EQUIPMENT AND WAY STRUCTURES
1900
02
04
06
08
1910
12
14
16
18
1920
22
24
26
28
1930


MARKET STREET RAILWAY
EARNINGS AND EXPENSES
PER CAR HOUR
$3.75
3.50
3.25
3.00
2.75
2.50
2.25
2.00
1.75
1.50
1.25
PER CAR HOUR
EARNINGS PER CAR HOUR
EXPENSES PER CAR HOUR
1904 06 08 1910 12 14 16 18 1920 22 24 26 28 1930 32

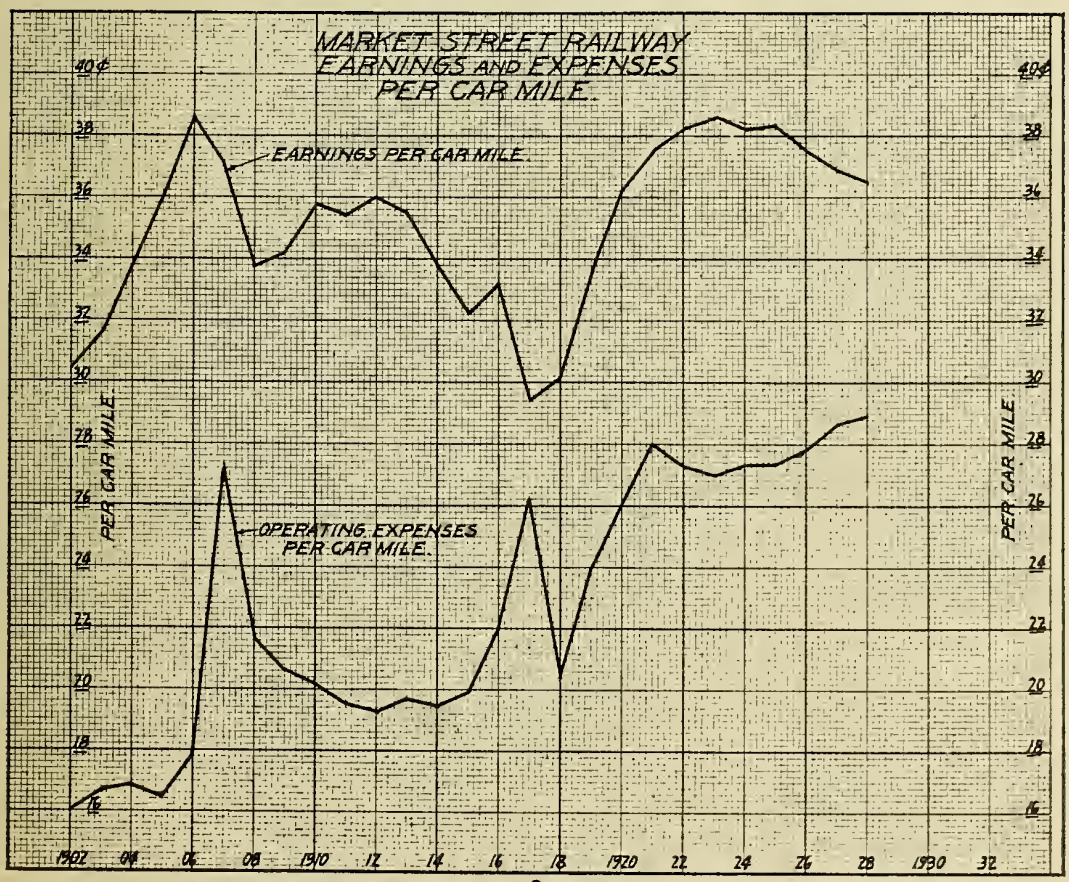

MARKET STREET RAILWAY
EARNINGS AND EXPENSES
PER CAR MILE.
40¢
38
36
34
32
30
28
26
24
22
20
18
16
PER CAR MILE
EARNINGS PER CAR MILE.
OPERATING EXPENSES
PER CAR MILE.
1907 04 06 08 1910 12 14 16 18 1920 22 24 26 28 1930 32

TABLE XVIII.

MARKET STREET RAILWAY COMPANY
OPERATING EXPENSES BY MAJOR GROUPS I. C. C. ACCOUNTS
1919 TO 1928.

Year	Structures	Equipment	Power	Conducting Transportation	Traffic	General and Miscellaneous	Transportation for Investment Credit	Total
1919	410,062.24	526,120.87	1,349,063.21	3,230,909.61	94.84	674,117.83	84,218.95	6,106,149.65
1920	413,852.16	578,000.41	1,465,573.59	3,623,059.09	915.60	702,307.76	91,817.06	6,691,891.55
1921	660,469.18	654,308.57	1,513,876.88	3,615,242.76	131.20	728,126.92	118,377.89	7,053,777.62
1922	550,367.98	649,486.56	1,453,603.15	3,394,206.35	661.89	811,711.79	.....	6,860,037.72
1923	585,426.70	640,938.72	1,346,159.04	3,500,178.70	7,139.67	754,345.61	.....	6,834,188.44
1924	644,916.19	660,126.73	1,335,343.02	3,582,102.94	5,195.86	808,523.50	.....	7,036,208.24
1925	643,878.25	648,008.26	1,331,060.39	3,601,356.99	6,499.78	822,235.82	.....	7,053,040.09
1926	674,210.73	663,643.98	1,364,951.87	3,812,843.82	32,962.01	845,092.84	.....	7,393,705.25
1927	671,390.93	691,269.52	1,360,576.55	3,902,674.31	76,636.73	938,310.03	.....	7,640,858.07
1928	656,462.25	643,191.71	1,378,601.41	3,940,251.54	101,912.67	1,026,193.24	.....	7,746,612.82

bus service. Practically all of the other lines are either standing still or show a slight decrease in revenue.

Operating Expenses

As was indicated under "Income," there has been a marked increase in the operating expenses of the Railway during the past ten years. Three charts are given—one shows operating revenue and expenses in dollars from 1900 to 1928; the second, the earnings and the expenses per car hour from 1905 to 1928; the third, earnings and expenses per car mile from 1902 to 1928. It should be noted on all of these charts that the curve of earnings and the curve of expenses are drawing together.

In Table XVIII there have been set up the expenses divided into the Interstate Commerce Commission major groups of accounts. These accounts for the year 1928 have the following relation to the total:

Way and Structures	8.5%
Equipment	8.3%
Power	17.8%
Conducting Transportation	50.9%
Traffic	1.3%
General and Miscellaneous	13.2%

Under the "Way and Structures" account it is to be noted that the amount expended for keeping up the plant has not varied greatly since 1921. In the past two years following the control passing into the hands of the Byllesby organization, the expenditures were a little higher but dropped down again during the year 1928.

The same is practically true of the "Equipment" account.

"Power" shows a marked drop-off in 1923, as compared with previous years, indicating the effect of the control of the Sierra and San Francisco Power Company passing into the hands of the Pacific Gas and Electric Company and the establishment of electric rate schedule P-9 by the California Railroad Commission.

"Conducting Transportation" shows a general increase during the ten-year period with the exception of 1922 when the amount decreased. This account closely follows the change of wage scale as detailed under the discussion about wages.

The "Traffic" group of accounts shows a large increase since 1919, the greater increase occurring in the last three years from 1926 to 1928. This is due to the change in public relation policies of the Company under the Byllesby management. While the increase within the account is very large, it does not appreciably affect the total expense as the entire group for 1928 was but a small percentage of the total.

The "General and Miscellaneous" group of accounts shows a progressive increase since 1919 except for the years 1923 and 1924. This increase is due to changes in General Officers and Clerks, and to an increase in "Pensions and Gratuities" as other expenses show no marked increases. Salaries and expenses of General Officers have increased from approximately $63,000 in 1922 and 1923 to $227,000 in 1928.

Another chart is inserted showing the operating expenses on both the car mile and the car hour basis for the purpose of showing the relation between the two by years since 1902.

In order to furnish more details as to the makeup of the "Operating Expenses" there follow as Table XIX the 1928 Operating Expenses listed by the Interstate Commerce Commission accounts. The first column of percentages shows the ratio that each account bears to the total of the group while the last column

shows the ratio which the particular account bears to the total "Operating Expenses." In Table XX the same figures are divded to show the Costs of Cable, Bus, and Trolley operation.

The "Way and Structures" group accounts for 8.5% of the total expenditures, while "Paving" costs are 19.8% of the group, or 1.7% of the total expenditure, the actual expense being $129,808.81 for the year.

The "Power" group represents 17.8% of the total, the largest single item being for "Power Purchased," which covers 89.8% of the group, or 16% of the total expenditures.

As would be expected, the "Wages of Passenger Conductors and Motormen" which covers 42.8% of the total "Operating Expenses" and 83.1% of the "Conducting Transportation" group, is the largest single item not only in the group, but also in the entire list of expenses.

This group also contains two other items which are relatively large, namely:

Superintendence of Transportation.....3.4% of total
Car House Employees .....3.7% " "

The next group "Traffic" is relatively small, being but 1.3% of the total, the largest item being for advertising, which accounts for 0.8% of the total.

TABLE XIX.

MARKET STREET RAILWAY COMPANY OPERATING EXPENSE—1928

I. C. C. Acct. No.			% of Group	% of Total
	Way and Structures			
1.	Superintendence	$ 52,488.25	8.00	.70
2.	Ballast	2,571.19	.40	..
3.	Ties	6,503.80	1.00	.10
4.	Rails	13,094.93	2.00	.20
5.	Rail Fastenings and Joints	14,472.27	2.20	.20
6.	Special Work	13,750.09	2.10	.20
7.	Underground Construction	2,005.49	.30	..
8.	Track and Roadway Labor	229,814.13	35.00	3.00
9.	Misc. Track and Roadway Expense	19,646.03	3.00	.20
10.	Paving	129,808.81	19.80	1.70
11.	Cleaning and Sanding Track	37,177.65	5.70	.50
15.	Bridges, Trestles and Culverts	1,082.75	.20	..
16.	Crossings, Fences and Signs	1,863.89	.30	..
17.	Signals	2,694.94	.40	..
19.	Miscellaneous Way Expenses	5,690.78	.70	.10
20.	Poles and Fixtures	14,131.41	2.10	.20
21.	Underground Conduits	34.46	....	..
22.	Distribution System	60,581.64	9.20	.80
23.	Miscellaneous Electric Line Expense	3,635.75	.60	..
24.	Buildings, Fixtures and Grounds	45,413.99	7.00	.60
25.	Depreciation	.....	....	..
	Total Way and Structures	**$ 656,462.25**	**100.00**	**8.50**
	Equipment			
29.	Superintendence	17,708.24	2.80	.20
30.	Passenger Cars	366,563.27	57.00	4.70
32.	Service Equipment	3,708.04	.60	.10
33.	Electric Equipment of Cars	196,196.87	30.40	2.50
36.	Shop Equipment	11,641.96	1.80	.20
37.	Shop Expenses	33,370.90	5.20	.40
38.	Vehicles and Horses	14,002.43	2.20	.20
39.	Miscellaneous Equipment Expenses	.....	....	..
40.	Depreciation of Equipment	.....	....	..
	Total Equipment	**$ 643,191.71**	**100.00**	**8.30**
	Power			
45.	Superintendence	8,331.23	.60	.10
46.	Power Plant Buildings	869.48	..	..
47.	Power Plant Equipment	42,181.68	3.10	.50
48.	Substation Equipment	5,438.90	.40	.10
50.	Depreciation	.....	..	..
52.	Power Plant Employees	13,687.30	1.00	.20
53.	Fuel for Power	12,400.82	.90	.20
55.	Lubricants for Power	977.07	.10	..
56.	Miscellaneous Supplies and Expenses	896.47	..	..
57.	Substation Employees	52,636.47	3.80	.70
58.	Substation Supplies and Expenses	4,137.10	.30	..
59.	Power Purchased	1,237,044.89	89.80	16.00
	Total Power	**$1,378,601.41**	**100.00**	**17.80**

TABLE XIX (Continued).

Conducting Transportation

63.	Superintendence	$ 264,774.57	6.70	3.40
64.	Passenger Conductors, Motormen	3,278,480.48	83.10	42.30
66.	Misc. Car Service Employees	21,150.78	.60	.30
67.	Misc. Car Service Expenses	63,153.83	1.60	.80
68.	Station Employees	41.34	....	..
69.	Station Expenses	1,251.66	.10	..
70.	Carhouse Employees	283,493.17	7.20	3.70
71.	Carhouse Expenses	6,870.59	.20	.10
72.	Signals	2,638.58	.10	.10
73.	Oper. Tel. and Tel. Lines	8,496.90	.20	.10
78.	Other Transportation Expenses	9,899.64	.20	.10
	Total Conducting Transportation	**$3,910,251.54**	**100.00**	**50.90**

Traffic

79.	Superintendence	29,783.81	29.20	.40
80.	Advertising	62,125.89	61.00	.80
82.	Miscellaneous Traffic Expense	10,002.97	9.80	.10
	Total—Traffic	**$ 101,912.67**	**100.00**	**1.30**

General and Miscellaneous

83.	General Officers	227,231.91	22.10	3.00
84.	General Office Clerks	84,231.91	8.20	1.10
85.	Supplies and Expenses	48,969.05	4.80	.60
86.	Law Expenses	67,861.62	6.50	.90
87.	Relief Department Expense	10,751.57	1.10	.10
88.	Pensions and Gratuities	52,369.35	5.20	.80
89.	Miscellaneous General Expenses	58,648.25	5.70	.80
90.	Valuation Expenses	13,681.21	1.30	.10
92.	Injuries and Damages	285,603.72	27.90	3.70
93.	Insurance	36,694.93	3.60	.40
94.	Stationery and Printing	42,634.61	4.10	.50
95.	Store Expenses	32,274.57	3.20	.40
96.	Garage and Stable Expense	47,351.92	4.60	.60
98.	Rent of Equipment	17,100.00	1.70	.20
	Total—General and Miscellaneous	**$1,026,193.24**	**100.00**	**13.20**
	Total Operating Expense	**$7,746,612.82**		**100.00**

Summary

I.	Way and Structures	$ 656,462.25	8.50
II.	Equipment	643,191.71	8.30
III.	Power	1,378,601.41	17.80
IV.	Conducting Transportation	3,940,251.54	50.86
V.	Traffic	101,912.67	1.30
VI.	General and Miscellaneous	1,026,193.24	13.30
	Total Operating Expense	**$7,746,612.82**	**100.00**

The "General and Miscellaneous" group is 13.3% of the total. Only three items run more than 1% of the total, namely:

Salaries and Expenses of General Officers.....3 %
Salaries and Expenses of General Office Clerks.....1.1%
Injuries and damages.....3.7%

TABLE XX.

MARKET STREET RAILWAY COMPANY ANALYSIS OF OPERATING EXPENSES—1928

	Way and Structures	Total	Cable Operation	Bus Operation	Total Cable and Bus Operation	Total Trolley Operation
1.	Superintendence	$ 52,488.25	$ 2,072.23	.....	$ 2,072.23	$ 50,416.02
2.	Ballast	2,571.19	.....	.....	.....	2,571.19
3.	Ties	6,503.80	.....	.....	.....	6,503.80
4.	Rails	13,094.93	79.58	.....	79.58	13,015.35
5.	Rail Fastenings and Joints	14,472.27	749.84	.....	749.84	13,722.43
6.	Special Work	13,750.09	11.30	.....	11.30	13,738.79
7.	Underground Construction	2,005.49	2,005.49	.....	2,005.49	.....
8.	Track and Roadway Labor	229,814.13	14,732.14	.....	14,732.14	215,081.99
9.	Miscellaneous Track and Roadway Expense	19,646.03	267.64	.....	267.64	19,378.39
10.	Paving	129,808.81	3,144.79	.....	3,144.79	126,664.02
11.	Cleaning and Sanding Track	37,177.65	13,868.35	.....	13,868.35	23,309.30
15.	Bridges, Trestles and Culverts	1,082.75	.....	.....	.....	1,082.75
16.	Crossings, Fences and Signs	1,863.89	5.38	.....	5.38	1,858.51
17.	Signal and Interlocking Apparatus	2,694.94	505.26	.....	505.26	2,189.68
19.	Miscellaneous Way Expenses	5,690.78	.....	.....	.....	5,690.78
20.	Poles and Fixtures	14,131.41	.....	.....	.....	14,131.41
21.	Underground Conduits	34.46	.....	.....	.....	34.46
22.	Distribution System	60,581.64	.....	.....	.....	60,581.64
23.	Miscellaneous Electric Line Expenses	3,635.75	.....	.....	.....	3,635.75
24.	Buildings, Fixtures and Grounds	45,413.99	6,754.77	.....	6,754.77	38,659.22
	Total Way and Structures	**$ 656,462.25**	**$ 44,196.77**		**$ 44,196.77**	**$ 612,265.48**
	Equipment					
29.	Superintendence	$ 17,708.24	$ 1,017.01	.....	$ 1,017.01	$ 16,691.23
30.	Passenger and Combination Cars	366,563.27	32,259.14	13,198.04	45,457.18	321,106.09
32.	Service Equipment	3,708.04	.....	.....	.....	3,708.04
33.	Electric Equipment of Cars	196,196.87	.....	.....	.....	196,196.87
36.	Shop Equipment	11,641.96	892.64	.....	892.64	10,749.32
37.	Shop Expenses	33,370.90	1,327.61	.....	1,327.61	32,043.29
38.	Vehicles and Horses	14,002.43	559.61	.....	559.61	13,442.82
	Total Equipment	**$ 643,191.71**	**$ 36,056.01**	**$13,198.04**	**$ 49,254.05**	**$ 593,937.66**

TABLE XX (Continued)

MARKET STREET RAILWAY COMPANY ANALYSIS OF OPERATING EXPENSES—1928

	Power	Total	Cable Operation	Bus Operation	Total Cable and Bus Operation	Total Trolley Operation
45.	Superintendence	$ 8,331.23	$ 2,716.80	.....	2,716.80	5,614.43
46.	Power Plant Buildings, Fixtures and Grounds	869.48	245.57	.....	245.57	623.91
47.	Power Plant Equipment	42,181.68	40,921.70	.....	40,921.70	1,259.98
48.	Substation Equipment	5,438.90	.....	.....	.....	5,438.90
52.	Power Plant Employees	13,687.30	13,687.30	.....	13,687.30	.....
53.	Fuel for Power	12,400.82	.....	12,400.82	12,400.82	.....
55.	Lubricants for Power	977.07	255.82	721.25	977.07	.....
56.	Miscellaneous Power Plant Supplies and Expense	896.47	896.47	.....	896.47	.....
57.	Substation Employees	52,636.47	.....	.....	.....	52,636.47
58.	Substation Supplies and Expense	4,137.10	.....	.....	.....	4,137.10
59.	Power Purchased	1,237,044.89	32,502.00	.....	32,502.00	1,204,542.89
	Total Power	**$1,378,601.41**	**$ 91,225.66**	**$13,122.07**	**$104,347.73**	**$1,274,253.68**
	Conducting Transportation					
63.	Superintendence	$ 264,774.57	$ 28,867.28	1,237.85	30,105.13	234,669.44
64.	Passenger Conductors, Motormen and Trainmen	3,278,480.48	201,759.71	16,531.10	218,300.81	3,060,179.67
66.	Miscellaneous Car Service Employees	21,150.78	544.49	.....	544.49	20,606.29
67.	Miscellaneous Car Service Expenses	63,153.83	2,192.00	.....	2,192.00	60,961.83
68.	Station Employees	41.34	.....	.....	.....	41.34
69.	Station Expenses	1,251.66	.....	.....	.....	1,251.66
70.	Carhouse Employees	283,493.17	17,208.62	59.00	17,267.62	266,225.55
71.	Carhouse Expenses	6,870.59	809.96	.....	809.96	6,060.63
72.	Operation Signal and Interlocking Apparatus	2,638.58	1,740.07	.....	1,740.07	898.51
73.	Operation of Telephone and Telegraph Lines	8,496.90	300.78	.....	300.78	8,196.12
78.	Other Transportation Expenses	9,899.64	447.29	533.90	981.19	8,918.45
	Total Conducting Transportation	**$3,940,251.54**	**$253,880.20**	**$18,361.85**	**$272,242.05**	**$3,668,009.49**

TABLE XX (Continued)

MARKET STREET RAILWAY COMPANY ANALYSIS OF OPERATING EXPENSES—1928

	Traffic	Total	Cable Operation	Bus Operation	Total Cable and Bus Operation	Total Trolley Operation
79.	Superintendence	$ 29,783.81	$ 1,238.27	$ 146.19	$ 1,384.46	$ 28,399.35
80.	Advertising	62,125.89	3,109.36	49.61	3,158.97	58,966.92
82.	Miscellaneous Traffic Expenses	10,002.97	393.31	301.44	694.75	9,308.22
	Total Traffic	**$ 101,912.67**	**$ 4,740.94**	**$ 497.24**	**$ 5,238.18**	**$ 96,674.49**
	General and Miscellaneous					
83.	Salaries and Expenses of General Officers	$ 227,231.91	11,371.44	$ 1,111.69	12,483.13	214,748.78
84.	Salaries and Expenses of General Office Clerks	84,520.53	3,988.07	415.82	4,403.89	80,116.64
85.	General Office Supplies and Expenses	48,969.05	2,428.63	239.31	2,667.94	46,301.11
86.	Law Expenses	67,861.62	3,369.87	332.35	3,702.22	64,159.40
87.	Relief Department Expenses	10,751.57	537.57	48.90	586.47	10,165.10
88.	Pensions and Gratuities	52,869.35	2,643.74	264.18	2,907.92	49,961.43
89.	Miscellaneous General Expenses	58,648.25	2,886.82	286.80	3,173.62	55,474.63
90.	Valuation Expenses	13,681.21	684.32	66.61	750.93	12,930.28
92.	Injuries and Damages	285,603.72	14,280.18	1,390.40	15,670.58	269,933.14
93.	Insurance	36,694.93	1,839.20	189.86	2,029.06	34,665.87
94.	Stationery and Printing	42,634.61	2,161.22	202.88	2,364.10	40,270.51
95.	Store Expenses	32,274.57	1,237.42	159.70	1,397.12	30,877.45
96.	Garage and Stable Expenses	47,351.92	1,752.93	.....	1,752.93	45,598.99
98.	Rent of Equipment	17,100.00	855.00	3.62	858.62	16,241.38
	Total General and Miscellaneous	**$1,026,193.24**	**$ 50,036.41**	**$ 4,712.12**	**$ 54,748.53**	**$ 971,444.71**
	GRAND TOTAL	**$7,746,612.82**	**$480,135.99**	**$49,891.32**	**$530,027.31**	**$7,216,585.51**
	Cost per Car Mile, Cents		41.8796	18.7562		28.4651
	Cost per Car Hour, Dollars		2.6438	1.7898		2.6168

Trend of Railway Costs

Table XXI, showing average costs from 1913 to 1928, has been taken from the Electric Railway Journal of January 12, 1929, and covers the following major itms of railway expense:

Railway Operating Materials.
Electric Railway Wages.
Electric Railway Construction Costs.
General Construction Costs.

TABLE XXI.

RAILWAY COSTS 1913–1928 AS PERCENTAGE OF 1913 COSTS.

	Elec. Ry. Operating Materials Costs (Richey)	Electric Railway Wages (Richey)	Elec. Ry. Construction Costs (Am. Elec. Ry. Assn.)	General Construction Costs (Eng. News-Record)
1913	100.0	100.0	100.0	100.0
1914	92.6	104.2	94.0	88.6
1915	93.5	106.2	97.3	92.6
1916	126.2	111.6	119.8	129.6
1917	181.9	120.6	162.7	181.2
1918	168.8	140.5	192.5	189.2
1919	172.2	174.0	205.1	198.4
1920	224.6	217.3	244.7	251.3
1921	169.9	222.7	200.7	201.8
1922	170.0	210.0	175.2	174.4
1923	168.0	212.1	200.2	214.1
1924	156.0	219.2	204.6	215.4
1925	156.1	222.2	202.4	206.7
1926	155.0	225.3	202.6	208.0
1927	145.7	227.5	201.1	206.2
1928	142.2	229.3	203.1	206.8

This very clearly shows that the peak of costs, except wages, occurred in the year 1920. Wages were at the highest point in 1928. In San Francisco there has been no offsetting increase in fares, while throughout the country on other street railway systems, fares have increased 57.7% since 1913. The increases in labor and material costs have come upon the San Francisco railways as well as upon the other lines of the country and in addition to paying a higher price for materials in the eastern markets, it has been necessary to pay increased freight rates to the Pacific Coast.

The actual changes in wages paid by the Market Street Company are set up in Table XXII. It is to be noted that, while there has been a slight decrease in the cost of operating materials since 1924, the cost of railway construction has remained almost stationary.

TABLE XXII.

MARKET STREET RAILWAY WAGE SCALE DATA.

Platform Men

April	13, 1919	From	42c	to	48c	per hour
July	13, 1919	"	46c	"	52c	" "
July	11, 1920	"	50c	"	56c	" "
Sept.	4, 1921	"	42c	"	52c	" "
April	29, 1923	"	46c	"	54c	" "
Feb.	28, 1926	"	48c	"	56c	" "

Average for first 3 months of 1929—54.624c per hour.

Average for All Track Men

January,	1919	$3.41 for 9 hours
"	1920	3.86 " " "
"	1921	3.99 " " "
"	1922	3.74 " " "
"	1923	3.71 " " "
"	1924	3.92 " " "
"	1925	3.95 " " "
"	1926	3.93 " " "
"	1927	4.13 " " "
"	1928	4.02 " " "
"	1929	4.13 " " "

Car Cleaners

1919	35c per hour
1920	40c " "
1921	38c " "
1923	40c " "
1926	44½c " "
1929	44½c " "

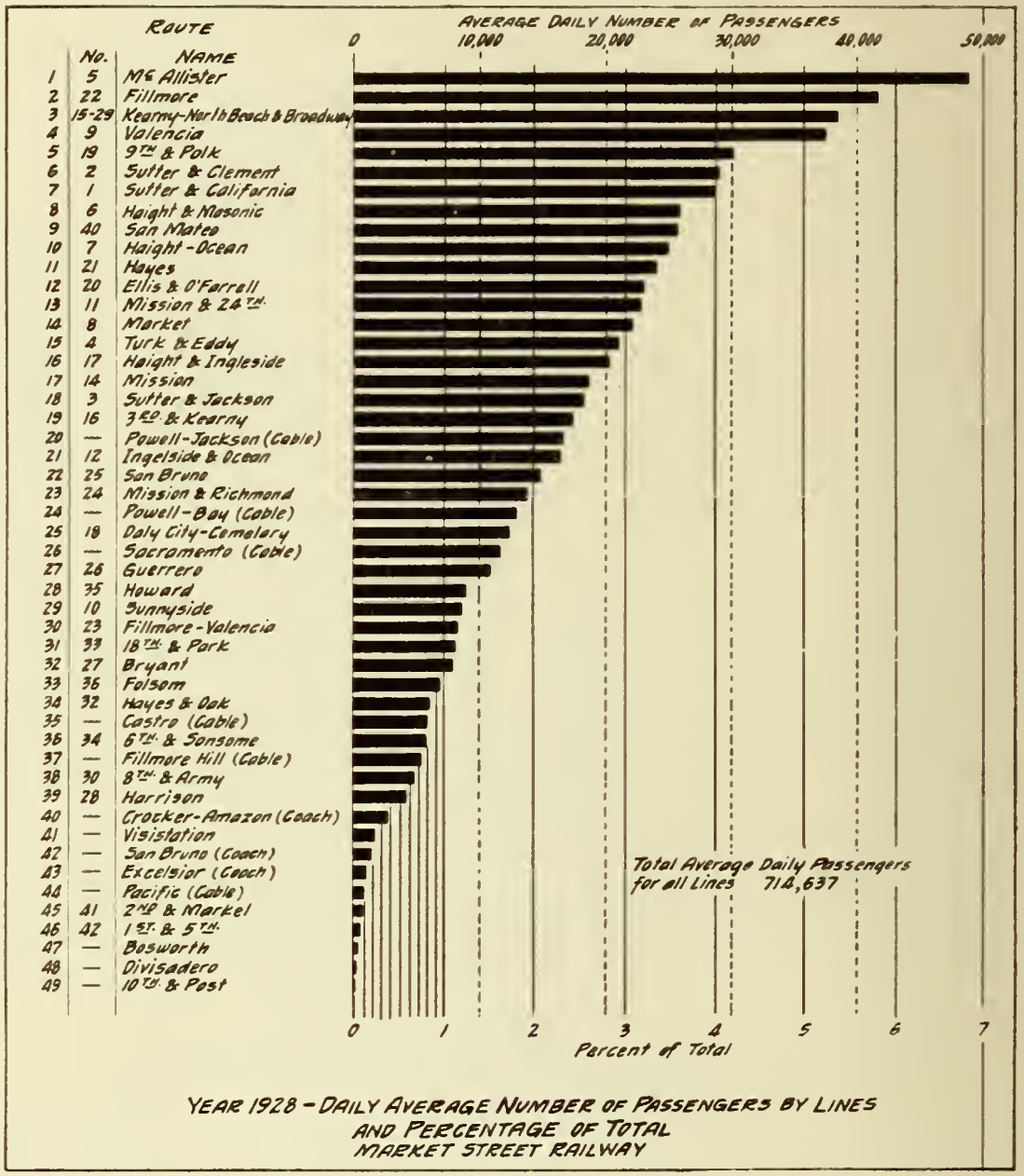
Mechanics—Per Hour

Year	Machinists	Blacksmiths	Carpenters	Painters
1919	62c	65c	62c	59c
1920	67c	70c	67c	64c
1921 (9–1–21)	63c	66c	63c	60c
1923	65c	68c	65c	65c
1926 (3–1–26)	67c	70c	67c	67c
1929	67c	72c	67c	67c

CHAPTER VI.

TRAFFIC SURVEY.

The daily average number of passengers carried in the year 1928 by each line of the Market Street Railway and the percentage which this bears to the total Market Street Railway passengers are shown by a graph on which the lines are arranged



YEAR 1928 - DAILY AVERAGE NUMBER OF PASSENGERS BY LINES AND PERCENTAGE OF TOTAL MARKET STREET RAILWAY

in the order of average number of passengers carried daily. The Market Street System, during the year 1928, carried an average of 714,638 passengers per day, of which the McAllister Street Line carried nearly 49,000 or nearly seven per cent of the total. There are six lnes carrying four or more per cent of the total and,

TABLE No. XXIII

STATEMENT OF PASSENGERS CARRIED BY ALL LINES — YEAR 1928
TO ACCOMPANY STREET RAILWAY REPORT
M.M. O'SHAUGHNESSY CITY ENGINEER

DESIGNATION	LINE	TOTAL REVENUE PASSENGERS	NUMERICAL ORDER	% OF TOTAL	TOTAL TRANSFER PASSENGERS	% OF TOTAL	% LINE TOTAL	TOTAL REVENUE & AND TRANSFER PASSENGERS	% OF TOTAL	AVERAGE TOTAL PASSENGERS PER DAY (TOTAL ÷ 365)	NUMERICAL ORDER
5	MC ALLISTER	14 479 309	1	5.292	3 408 695	4.029	19.06	17 888 004	4.994	48 874	1
9	VALENCIA	10 585 116	2	3.868	3 118 937	3.687	22.75	13 704 053	3.825	37 443	4
B	GEARY & OCEAN	9 928 831	3	3.629	1 528 876	1.807	13.34	11 457 707	3.198	31 305	5
22	FILLMORE	9 455 610	4	3.456	5 791 329	6.854	38.01	15 246 939	4.256	41 658	2
15&29	KEARNY-NORTH BEACH-BROADWAY	9 318 597	5	3.406	4 686 137	5.539	33.45	14 004 734	3.909	38 263	3
40	SAN MATEO	8 827 087	6	3.226	539 343	.638	5.75	9 366 430	2.615	25 591	11
K	MARKET & INGLESIDE	8 307 177	7	3.036	1 272 635	1.505	13.28	9 579 812	2.674	26 175	9
1	SUTTER & CALIFORNIA	8 142 701	8	2.976	2 289 849	2.707	21.93	10 432 550	2.912	28 504	8
Z	SUTTER & CLEMENT	7 944 408	9	2.903	2 509 519	2.966	24.00	10 453 927	2.918	28 563	7
6	HAIGHT & MASONIC	7 707 377	10	2.817	1 669 986	1.974	17.80	9 377 363	2.618	25 621	10
J	CHURCH	7 565 287	11	2.765	1 026 689	1.214	11.95	8 591 976	2.398	23 476	14
7	HAIGHT & OCEAN	7 496 959	12	2.740	1 606 983	1.900	17.86	9 103 942	2.541	24 874	12
21	HAYES	7 079 019	13	2.587	1 611 098	1.905	18.55	8 690 117	2.426	23 744	13
C	GEARY & CALIFORNIA	7 030 566	14	2.569	1 030 745	1.218	12.79	8 061 311	2.250	22 025	18
19	9TH & POLK	6 701 755	15	2.449	4 268 355	5.045	38.85	10 970 110	3.062	29 973	6
F	STOCKTON	6 576 317	16	2.403	1 798 659	2.126	21.50	8 374 976	2.338	22 884	15
11	MISSION & 24TH	6 486 052	17	2.370	1 810 297	2.140	21.85	8 296 349	2.316	22 668	17
20	ELLIS & O'FARRELL	6 270 517	18	2.292	2 059 119	2.434	24.72	8 329 636	2.329	22 759	16
4	TURK & EDDY	6 076 091	19	2.221	1 492 041	1.764	19.75	7 568 132	2.113	20 678	21
17	HAIGHT & INGLESIDE	6 033 711	20	2.205	1 325 998	1.567	18.03	7 359 709	2.054	20 109	22
A	GEARY & PARK	5 876 454	21	2.148	1 205 772	1.425	17.02	7 082 226	1.977	19 351	23
8	MARKET	5 830 894	22	2.131	2 144 096	2.534	26.90	7 974 990	2.226	21 790	19
D	GEARY & VAN NESS	5 643 623	23	2.063	551 837	.652	8.90	6 195 460	1.729	16 928	28
—	HYDE & O'FARRELL - CABLE	5 504 473	24	2.012	1 023 789	1.210	15.70	6 528 262	1.822	17 837	26
14	MISSION	5 264 981	25	1.924	1 532 698	1.812	22.55	8 797 879	1.838	18 573	24
3	SUTTER & JACKSON	5 116 399	26	1.870	1 443 442	1.706	22.00	6 559 841	1.831	17 923	25
L	MARKET & TARAVAL	5 052 330	27	1.846	802 841	.949	13.71	5 855 171	1.633	15 998	32
H	POTRERO & VAN NESS	4 967 461	28	1.815	2 727 804	3.224	35.42	7 695 265	2.151	21 026	20
—	CALIFORNIA - CABLE	4 769 449	29	1.743	974 194	1.152	16.97	5 743 643	1.603	15 693	33
12	INGLESIDE & OCEAN	4 727 985	30	1.728	1 346 073	1.588	22.18	6 074 058	1.698	16 596	30
E	UNION	4 555 168	31	1.665	1 406 750	1.663	23.60	5 961 916	1.664	16 289	31
16	3RD & KEARNY	4 391 373	32	1.605	1 984 489	2.346	31.14	6 375 862	1.780	17 421	27
—	POWELL-JACKSON CABLE	4 017 972	33	1.468	2 085 410	2.465	34.15	6 103 382	1.704	16 676	29
25	SAN BRUNO	3 728 683	34	1.362	1 754 084	2.073	32.04	5 480 767	1.530	14 970	34
24	MISSION & RICHMOND	3 578 704	35	1.308	1 540 907	1.821	30.11	5 119 611	1.429	13 988	35
18	DALY CITY - CEMETERIES	3 558 686	36	1.301	988 122	1.188	21.76	4 546 808	1.269	12 423	37
—	POWELL - BAY CABLE	3 088 541	37	1.129	1 635 600	1.933	34.82	4 724 141	1.319	12 907	36
—	SACRAMENTO CABLE	3 025 527	38	1.106	1 252 449	1.481	29.29	4 277 976	1.194	11 688	38
26	GUERRERO	2 813 888	39	1.028	1 158 519	1.369	29.18	3 972 407	1.109	10 854	39
35	HOWARD	2 592 689	40	.948	638 395	.755	19.76	3 231 084	.902	8 828	40
10	SUNNYSIDE	2 422 376	41	.885	717 209	.848	22.84	3 139 585	.876	8 578	41
23	FILLMORE & VALENCIA	2 202 688	42	.805	893 871	1.057	28.86	3 096 559	.864	8 461	42
36	FOLSOM	1 969 119	43	.720	571 426	.676	22.50	2 540 545	.709	6 941	45
32	HAYES & OAK	1 905 371	44	.696	268 623	.318	12.34	2 173 994	.607	5 940	46
33	16TH & PARK	1 904 994	45	.696	1 141 502	1.349	37.48	3 046 496	.850	8 324	43
27	BRYANT	1 787 540	46	.653	1 107 798	1.309	38.20	2 895 338	.808	7 911	44
*N	JUDAH	1 521 966	47	.556	187 884	.222	10.99	1 709 850	.477	4 672	51
34	6TH & SANSOME	1 373 425	48	.502	780 855	.923	36.21	2 154 280	.601	5 886	48
30	8TH & ARMY	1 182 344	49	.432	554 262	.655	31.93	1 736 606	.485	4 745	50
28	HARRISON	1 140 053	50	.417	400 350	.473	26.00	1 540 403	.430	4 209	52
—	CASTRO CABLE	1 015 004	51	.371	1 139 985	1.348	52.85	2 154 989	.602	5 888	47
—	FILLMORE HILL	919 692	52	.336	1 040 361	1.230	53.04	1 960 053	.547	5 355	49
—	M.R. EMBARCADERO COACH	754 299	53	.276			0.00	754 299	.211	2 061	55
—	M.R. PARK COACH	663 120	54	.242	353 324	.418	34.79	1 016 444	.284	2 777	53
—	CROCKER-AMAZON COACH	403 348	55	.147	553 016	.654	57.20	956 364	.267	2 613	54
—	M.R. OCEAN COACH	397 762	56	.145	282 787	.334	41.53	680 549	.190	1 859	57
M	OCEAN VIEW	369 265	57	.135	169 547	.201	31.46	538 812	.150	1 472	60
—	M.R. MONTEREY BLVD. COACH	305 619	58	.112	381 210	.451	55.50	686 829	.192	1 877	58
—	VISITACION	286 404	59	.105	271 700	.321	48.85	558 104	.156	1 525	58
—	SAN BRUNO COACH	263 979	60	.096	289 440	.342	52.26	553 419	.154	1 512	59
41	2ND & MARKET - S.P. DEPOT	174 795	61	.064	28 887	.034	14.19	203 682	.057	557	63
—	PACIFIC AVE. CABLE	145 909	62	.053	78 567	.093	35.00	224 476	.063	613	62
42	1ST & 5TH	136 113	63	.050	11 936	.014	8.06	148 049	.041	404	65
—	EXCELSIOR COACH	116 596	64	.043	165 392	.195	58.61	281 988	.079	770	61
—	M.R. MARINA COACH	68 914	65	.025	93 098	.110	57.40	162 012	.045	443	64
†—	BOSWORTH	42 452	66	.016	36 709	.043	46.38	79 161	.022	216	66
—	18TH & POST	18 342	67	.007	6 384	.008	25.83	24 726	.007	68	66
—	DIVISADERO	17 423	68	.006	32 152	.038	64.80	49 575	.014	135	67
	TOTALS	273 624 679		100.000	84 600 856	100.000	23.63	358 225 535	100.000	978 758	

Note:— * Operated only since October 21-1928
† Operation discontinued November 28-1928

eight lines carrying between three and four per cent. Of the remaining thirty-five routes, seventeen carry less than one per cent each.

Data By Lines

Table XXIII entitled "Statement of Passengers Carried by all Lines—Year 1928" combines the traffic of the Market Street, Municipal, and California Street systems in one tabulation, arranged in the order of the number of revenue passengers which they carried during the year 1928. There are shown the number of revenue passengers carried, the numerical order of the line, and the percentage of the total revenue which each line carried.

In the next column are the total number of transfer passengers carried by each line and the percentage of the total number of transfer passengers.

There next appears the percentage of passengers riding on transfers carried by the line, following which is the total number of revenue and transfer passengers with the percentage of the total carried by each line.

The next to the last column shows the average total daily number of passengers carried by routes.

The last column shows the numerical order of the lines on the basis of the total number of passengers that they carry each day. This column contains some surprises to one who has not been closely following traffic, as it shows that the cross-town lines are carrying large numbers of the passengers—the Fillmore Street line being number two, the Kearny Street lines being number three and the Polk Street line number six in the total number of passengers carried, ranking above the Sutter lines and the Geary Street lines.

TABLE NO. XXIV

TRAFFIC STATISTICS ALL SYSTEMS
CALENDAR YEARS 1919–1928
TO ACCOMPANY STREET RAILWAY REPORT
M. M. O'SHAUGHNESSY CITY ENGINEER

	1928	1927	1926	1925	1924	1923	1922	1921	1920	1919
	CAR MILEAGE									
Municipal Railway Cars	8 968 727	8 875 419	8 862 790	8 701 139	8 495 672	8 197 119	7 594 966	7 919 996	7 226 593	7 122 665
" " Coaches	721 127	891 816	497 076	387 553	338 040	280 235	279 912	275 042	234 943	260 324
" " Total	9 689 854	8 587 227	9 359 866	9 068 694	8 835 712	8 417 354	7 874 898	7 589 040	7 461 336	7 982 929
California St Cable R.R.	1 398 674	1 392 771	1 392 771	1 392 771	1 396 674	1 392 771	1 392 771	1 392 771	1 396 674	1 382 771
Market St Railway Co.	28 764 838	26 666 192	26 872 515	25 807 751	25 867 781	25 391 328	25 092 180	25 194 275	24 631 906	25 009 852
Total	37 891 388	37 626 190	37 325 152	36 289 218	36 098 167	35 301 454	34 959 799	34 136 084	36 498 116	34 278 852
	CAR HOURS									
Municipal Railway Cars	926 828	912 292	916 124	902 326	881 710	849 409	800 486	778 626	775 418	764 976
" " Coaches	77 978	72 737	52 170	38 687	35 027	28 183	28 694	27 887	24 385	27 840
" " Total	1 004 267	990 029	968 794	940 963	814 737	877 592	828 580	806 520	799 813	792 816
California St. Cable R.R.	195 634	193 948	183 940	193 949	195 834	193 948	193 948	193 948	194 491	193 948
Market St Railway Co.	2 967 228	2 978 282	2 959 505	2 879 714	2 867 781	2 891 924	2 792 928	2 819 388	2 899 444	2 911 182
Total	4 166 469	4 162 254	4 121 742	4 014 022	3 877 552	3 962 864	3 815 451	3 818 658	3 883 748	3 907 946
	REVENUE PASSENGERS									
Municipal Railway Cars	87 394 445	67 374 155	67 295 724	87 621 168	64 458 179	61 851 561	58 805 244	57 654 884	55 951 566	52 689 816
" " Coaches	2 189 714	7 018 068	1 199 912	970 887	756 304	640 429	599 123	972 732	477 329	466 573
" " Total	89 584 159	69 392 224	68 495 034	67 992 056	65 214 477	62 491 990	59 464 367	58 227 616	58 428 885	53 155 585
California St Cable R.R.	16 273 922	10 431 088	16 645 991	11 150 494	11 112 593	11 177 740	16 918 776	16 931 237	16 922 180	10 293 146
Market St Railway Co.	193 766 598	186 555 997	198 036 769*	188 277 566	197 379 624	196 515 456	191 924 926	188 819 288	186 538 883	172 245 218
Total	279 824 679	276 380 226	277 171 396	277 420 116	279 767 694	270 185 205	282 246 065	257 978 142	253 886 832	235 690 947
	TRANSFER PASSENGERS									
Municipal Railway Cars	13 710 039	13 402 342	13 335 411	12 979 488	12 352 827	12 211 315	11 788 311	11 218 836	10 690 617	10 024 311
" " Coaches	1 116 419	977 039	829 247	612 777	496 455	418 596	385 716	385 487	330 981	333 335
" " Total	14 820 458	14 379 381	14 164 656	13 592 297	12 851 282	12 627 911	12 102 026	11 604 128	11 021 598	10 357 864
California St. Cable R.R.	* 1 997 983	759 646	762 593	819 740	843 875	822 197	823 474	805 969	795 788	786 285
Market St Railway Co.	67 762 415	67 111 446	67 828 853	66 263 246	64 994 165	63 761 655	62 198 248	61 397 521	60 492 292	58 961 602
Total	84 800 856	82 244 677	82 755 904	80 671 273	78 689 322	77 211 163	75 121 748	73 805 015	72 309 878	68 126 649
	TOTAL REVENUE & TRANSFER PASSENGERS									
Municipal Railway Cars	61 104 484	80 776 497	80 631 135	80 000 649	76 811 000	74 062 876	70 518 555	68 879 522	66 642 163	62 713 321
" " Coaches	3 300 133	2 995 108	2 028 559	1 569 644	1 254 759	1 657 025	992 808	958 219	808 364	800 108
" " Total	84 404 817	83 771 605	82 859 854	81 984 298	78 065 759	75 119 961	71 506 393	69 631 741	67 450 467	63 513 427
California St. Cable R.R.	12 271 905	11 184 853	11 407 984	11 966 262	11 956 468	11 999 962	11 740 256	11 754 606	11 717 888	11 079 348
Market St. Railway Co.	261 549 013	263 667 445	265 859 622	264 540 834	262 369 789	260 276 585	254 121 174	250 218 810	267 028 155	228 226 820
Total	358 225 535	358 629 903	359 927 360	358 691 389	352 392 016	347 390 368	337 367 817	391 783 157	326 196 510	303 819 696
	FREE PASSENGERS									
Municipal Railway Cars	598 035	504 330	563 942	608 522	583 620	836 951	541 936	548 690	468 691	451 073
" " Coaches	7 420	7 938	4 260	688	213	274	916	1 547	1 413	1 970
" " Total	605 455	512 246	568 202	609 210	583 833	697 225	542 852	550 237	471 104	453 043
California St. Cable R.R.										
Market St. Railway Co.	451 184	516 079	563 394	549 033	593 497	563 786	602 890	613 530	586 818	596 408
Total	1 056 638	1 630 341	1 071 596	1 158 243	1 176 736	1 220 961	1 145 742	1 163 767	1 057 922	1 048 443
	TOTAL ALL PASSENGERS									
Municipal Railway Cars & Coaches	85 010 072	84 283 873	83 227 888	82 183 503	76 848 992	75 757 126	72 049 245	70 381 978	67 921 571	83 966 470
California St. Cable R.R.	12 271 905	11 184 855	11 407 964	11 866 262	11 956 466	11 999 962	11 740 250	11 734 606	11 717 888	11 079 349
Market St Railway Co.	262 000 197	264 183 516	266 369 016	265 069 867	262 963 266	260 860 241	254 724 064	250 830 340	247 614 973	229 823 220
Totals	359 282 174	359 654 244	360 996 696	359 249 632	353 566 746	346 617 329	336 919 559	392 946 924	327 254 432	304 869 039

* Note – California Street Cable R.R. transfer passengers for 1928 include 1,255,864 transfers between company's own lines. Previous years include only transfers from Municipal and Market Street Railways.

This also shows that each of twenty-nine of the lines carries less than one per cent of the total number of passengers, while only two lines, the McAllister Street and the Fillmore Street, carry more than four per cent.

Table XXIV gives car mile, car hour and passenger data by years from 1928 back to 1919 for the Municipal Railway, California Street Cable Railroad and the Market Street Railway, and for all three systems. The combined systems carried the maximum number of passengers in 1926, while the number of transfer passengers was greatest in 1928.

Transfers

While these tables show the total traffic handled by each line of the system, they do not show the origin and destination of the passengers handled.

The tables also show the total number of transfers collected on each line but do not show the origin of the transfer passengers. In order to obtain this information an analysis was made of the transfers of a normal week day. The transfers collected on Wednesday, March 6, 1929, were furnished through the courtesy of the company after their purposes had been served.

This analysis was made as follows: First, the transfers collected on each line were sorted by originating lines. Second, each group was counted and the result set down in tabular form as Table XXV.

On the day selected 199,893 transfers were collected. It was possible to tabulate all but about 2 per cent of this number. This per cent could not be tabulated because of the lack of information as to the lines on which they were collected.

In the table the left hand column indicates the lines issuing the transfers while the names of the lines collecting them appear at the head of the table. Opposite each issuing route are two lines, the upper one showing transfers issued inbound, the lower one those issued outbound. The transfers collected are not sorted by trips, making it impossible to determine whether they were collected inbound or outbound.

The totals across the bottom of the table show the approximate number of transfers collected on each route. The totals immediately after the name of the issuing line show the approximate number of inbound and outbound transfers issued by that route which were used.

As passengers are granted the privilege of transferring on a transfer by having the intermediate ride validated on the original transfer, this table does not show all of the use made of the transfer privilege. No record is kept of the use of the transfer on the intermediate line, making it impossible to follow the route of passengers using more than two cars to complete a ride.

The face of the transfer shows the line on which it originated and the conductors' records show the line on which it was collected thus showing the route on which a passenger started the trip and the route on which it was completed.

For instance, a passenger on an inbound Sutter Street car destined for some point on Valencia Street might make an intermediate transfer via Divisadero Street, Fillmore Street, Polk Street, Powell Street or Kearny Street, depending on where he boarded the inbound Sutter Street car. The records available would only show that he boarded a Sutter Street car and completed his ride on a Valencia Street car. The indication of his having used an intermediate line is a punch mark in a space on the transfer provided for validation by the intermediate conductor.

In order to determine the total number of transfers between two lines it is necessary to take from the table the inbound and outbound figures appearing where the first line, as issuing line, crosses the second line as the collecting line and add

TABLE XXV Transfer Analysis, Market Street

Originating Line		Total	Destination Lines																								
			1	2	3	4	5	6	7	8	9	10	11	12	14	15	16	17	18	19	20	21	22	23	24	25	26
1 & 2	TR	6693	-	-	275	308	195	81	59	62	80	25	54	38	32	513	392	68	77	896	73	506	377	188	133	75	37
	CUT	3086	-	-	94	177	135	57	50	18	20	8	20	1	15	50	26	37	18	767	29	155	626	107	168	9	14
3	TR	1961	95	11	-	18	96	18	14	9	15	4	11	5	12	158	81	3	7	195	14	4	72	15	7	12	9
	CUT	1191	32	60	-	63	37	21	19	10	10	4	4	1	9	36	7	13	10	395	11	19	151	50	24	6	-
4	TR	1821	104	127	37	-	49	18	30	29	23	8	13	4	19	116	89	21	12	183	115	49	163	58	26	77	17
	CUT	1469	104	164	15	-	151	15	27	5	1	-	-	1	2	19	12	11	7	197	27	26	435	55	18	19	1
5	TR	5376	87	93	93	113	-	31	16	72	101	21	44	13	19	416	289	31	50	602	289	91	827	200	212	197	37
	CUT	2571	83	111	37	174	-	19	128	11	10	7	11	12	11	35	31	32	29	297	107	37	765	75	94	168	9
6	TR	3279	68	77	90	96	57	-	24	29	120	14	22	28	25	168	110	28	31	288	139	15	601	36	231	88	61
	CUT	769	10	7	9	90	16	-	3	1	3	7	-	2	9	11	14	9	17	93	25	4	114	8	29	13	17
7	TR	2828	50	47	54	27	45	37	-	11	113	16	25	17	35	178	127	45	29	277	151	14	971	18	213	70	21
	CUT	663	11	21	8	36	55	7	-	5	4	6	2	1	1	20	13	24	6	82	21	2	125	25	30	40	9
8	TR	3017	53	56	104	39	122	36	44	-	32	2	24	25	15	292	124	39	13	359	95	58	426	30	192	76	-
	CUT	3011	4	5	24	52	6	9	16	-	16	9	33	2	16	38	28	6	29	130	39	5	90	7	92	72	16
9	TR	4373	57	57	101	46	101	130	104	51	-	8	66	29	53	381	202	122	36	627	119	84	319	61	113	80	14
	CUT	2959	2	4	14	43	4	2	9	12	-	136	198	73	208	26	35	23	152	173	44	4	219	198	451	132	140
10	TR	1664	19	22	18	8	36	23	24	9	171	-	37	11	22	82	72	20	8	124	50	33	232	17	77	13	22
	CUT	378	3	2	2	1	1	2	1	3	12	-	21	27	1	19	11	3	1	57	29	2	27	10	24	39	10
11	TR	3219	38	41	25	24	44	20	34	21	170	57	-	30	80	316	204	41	61	410	140	21	390	68	109	65	74
	CUT	1991	5	14	1	4	9	-	4	6	59	192	-	9	6	43	37	5	7	71	40	1	126	58	134	76	157
12	TR	2379	24	33	25	9	45	28	32	22	170	34	65	-	37	167	91	52	40	232	57	23	276	48	100	79	63
	CUT	1247	1	-	6	4	1	16	13	2	32	32	2	-	2	17	14	257	3	76	25	-	43	25	62	106	139
14	TR	2774	21	44	18	16	45	33	8	18	279	6	52	57	-	207	130	41	31	305	65	24	358	61	41	61	16
	CUT	1366	1	1	1	6	4	1	3	6	93	6	6	9	-	32	23	10	60	54	21	-	77	29	121	99	72
15	TR	4854	244	182	152	141	403	195	143	168	278	101	342	127	256	-	118	187	29	18	31	138	86	15	75	67	293
	CUT	1971	112	110	86	31	161	97	41	87	110	31	94	15	78	-	11	77	7	12	19	71	7	7	24	1	110
16	TR	1975	58	50	25	46	133	94	59	57	27	31	117	73	77	33	-	58	12	28	9	69	172	4	13	164	91
	CUT	2130	92	76	47	87	206	101	14	97	143	96	131	31	70	87	-	74	13	71	140	70	264	6	96	212	49
17	TR	2145	40	35	60	38	31	21	38	24	89	11	21	15	39	131	121	-	28	277	192	8	514	37	181	74	22
	CUT	991	19	10	9	37	14	3	10	6	8	6	4	165	17	15	15	-	17	44	25	1	92	12	32	34	19
18	TR	2160	38	23	92	23	93	82	37	27	256	26	198	50	19	69	38	67	-	289	18	29	360	38	88	67	37
	CUT	[illegible]	3	8	21	12	3	23	14	9	22	15	9	11	-	1	1	6	-	21	5	9	51	21	52	95	75
19	TR	8153	523	481	320	210	763	337	265	292	558	116	417	121	280	38	66	239	295	-	373	236	109	28	118	304	204
	CUT	[illegible]	211	287	207	190	196	92	14	83	129	38	78	21	57	19	3	36	26	-	139	46	14	6	16	7	25
20	TR	2395	31	50	32	118	197	38	25	95	64	79	51	54	39	52	104	48	14	278	-	81	112	37	55	17	34
	CUT	3035	31	77	34	119	211	150	253	63	41	97	104	53	71	3	3	295	22	251	-	71	327	68	58	8	73
21	TR	3106	38	97	67	26	158	11	8	37	80	11	49	29	34	185	182	15	42	392	199	-	951	16	91	179	51
	CUT	[illegible]	250	419	75	108	70	8	4	9	5	2	5	7	14	36	25	25	18	192	49	-	208	18	52	49	13
22	TR	7213	124	115	39	194	770	443	311	216	295	137	302	122	280	50	294	323	263	72	217	212	-	66	136	666	179
	CUT	6017	412	928	176	200	637	253	213	116	298	66	166	75	119	49	17	203	124	89	150	291	-	84	131	169	109
23	TR	[illegible]	12	16	4	13	97	11	-	15	49	15	98	58	59	1	1	27	37	4	30	9	62	-	46	25	17
	CUT	1265	48	73	29	78	117	31	23	41	119	3	97	18	22	13	3	60	23	23	29	58	78	-	30	5	9
24	TR	[illegible]	14	98	12	9	105	116	54	53	77	37	67	15	98	7	4	66	49	9	32	94	97	96	-	29	65
	CUT	[illegible]	78	150	16	24	111	127	119	66	217	13	93	71	59	37	15	108	23	78	18	50	132	33	-	27	27
25	TR	3297	33	37	34	67	197	27	87	73	125	35	98	62	69	86	34	72	32	204	15	40	666	13	38	-	35
	CUT	[illegible]	1	42	1	2	5	-	21	2	14	3	15	10	8	15	166	6	12	21	5	2	170	1	4	-	9
26	TR	1596	16	12	5	10	34	22	19	10	191	11	111	57	12	182	55	27	12	151	40	28	299	19	89	24	-
	CUT	390	-	-	-	1	7	1	5	4	19	2	27	28	18	19	9	38	10	30	14	1	32	8	26	31	-
27	TR	1217	22	26	6	26	97	38	58	35	61	97	99	16	29	102	68	37	10	68	35	24	167	2	10	58	21
	CUT	1227	1	3	2	2	5	3	16	9	60	12	17	55	119	10	10	24	78	31	19	7	151	20	103	97	93
28	TR	388	2	3	-	1	8	-	1	2	1	-	3	8	1	91	77	3			45	2	42	1	3	-	2
	CUT	911	25	40	18	13	51	28	14	34	28	8	23	22	13	8	7	5	2	2	12	38	-		5	3	19
29	TR	[illegible]	30	36	20	31	76	37	23	58	76	20	61	10	90	33	7	57	12	2	14	27	116	9	19	89	80
	CUT	[illegible]	13	55	20	73	103	93	16	92	57	24	10	21	29	92	9	54	5	26	87	55	137	1	18	9	96
30	TR	511	2	1	1	2	1	2	2	1	15	5	63	17	31	6	92	14	32	2	1	-	8	4	29	59	13
	CUT	[illegible]	5	-	1	3	5	15	18	10	31	3	18	17	23	9	101	18	11	56	1	19	65	4	12	81	5
32	TR	714	8	4	6	7	5	-	2	-	5	-	-	7	1	92	28	3	2	95	14	2	14	1	5	32	-
	CUT	[illegible]	8	5	1	10	10	6	27	-	1	1	1	2	2	6	2	14	3	32	6	4	30	1	3	9	1
33	TR	[illegible]	5	4	1	3	16	5	6	232	90	58	59	18	51	57	92	15	31	26	24	1	110	12	61	40	86
	CUT	751	2	2	1	4	2	171	67	18	23	16	33	16	17	5	1	52	23	16	10	2	25	13	21	5	26
34	TR	967	17	32	7	35	93	27	31	4	69	17	34	18	27	37	26	29	21	5	32	17	11	1	6	35	20
	CUT	[illegible]	14	19	7	28	92	14	15	10	12	7	21	9	8	21	8	19	6	10	27	18	7	1	2	-	6
35	TR	1178	6	16	3	11	23	18	14	11	19	12	96	22	15	171	78	10	13	83	51	14	205	3	28	36	9
	CUT	981	3	5	2	11	8	-	2	2	1	2	6	2	2	17	20	4	2	54	26	-	88	-	2	125	2
36	TR	[illegible]	6	21	5	10	24	12	7	4	11	4	6	2	-	162	40	11	1	89	69	4	190	10	5	97	2
	CUT	[illegible]	4	3	-	1	9	-	2	1	11	2	1	-	5	71	19	-	3	39	30	2	99	2	4	63	3
40	TR	[illegible]	17	6	12	18	59	36	22	4	72	23	99	31	18	39	22	52	28	89	12	15	173	16	36	22	31
	CUT	[illegible]	-	1	-	-	3	-	1	-	4	3	1	-	-	-	1	-	7	-	-	-	1	2	4	12	10
41	TR	149	3	2	-	2	11	4	5	5	8	11	3	1	3	3	2	13	-	6	8	13	2	-	-	-	3
	CUT	29	4	1	1	1	-	-	-	-	-	-	-	1	-	-	2	-	-	-	3	-	9	-	-	-	1
42	TR	29		3	-	1	7			1	-	-	-	-	-	3	-	-	-	-	-	2	-	-	-	-	-
	CUT	21	1	4	-	-	-	-	-	-	1	-	1	-	1	1	1	-	-	1	1	1	4	-	-	-	-
[illegible]	TR	1555	195	151	91	56	204	68	61	22	33	22	38	18	38	4	4	57	43	9	93	33	27	52	30	33	26
	CUT		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
[illegible] & POST	TR	13	-	-	-	-	-	-	4	-	1	-	-	-	-	-	-	2	-	-	-	-	-	-	-	3	-
	CUT	11	-	-	-	-	-	-	-	1	-	1	2	-	-	1	1	-	-	2	-	2	1	-	-	-	-
[illegible]	TR	384	-	-	-	-	-	-	-	-	11	-	-	4	174	-	-	-	117	-	-	-	-	-	1	-	11
	CUT	156	-	-	-	-	-	-	-	-	13	11	-	-	1	16	86	-	-	-	-	-	-	-	-	28	-
[illegible]	TR	17	-	-	-	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-
	CUT	18	1	-	1	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	1	1	-	-
SO. SAN. FRAN.	TR	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-
	CUT		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WASH. & JACKSON	TR	1966	110	103	88	76	182	114	83	80	192	7	93	16	30	5	9	77	56	86	114	86	9	6	18	105	15
	CUT	1586	193	186	187	11	18	12	7	4	18	2	1	1	3	4	-	28	7	237	7	4	169	5	6	9	3
POWELL & MASON	TR	2679	113	76	61	113	187	102	112	96	191	11	32	16	32	5	5	64	98	18	83	94	24	4	16	190	20
	CUT	937	113	218	111	11	4	8	5	1	28	-	-	-	-	5	3	-	-	18	8	-	3	1	3	7	-
SACTO. & CLAY	TR	758	10	7	53	4	17	1	-	3	6	4	6	2	3	113	96	4	2	85	8	1	2	-	5	2	1
	CUT	1371	17	19	111	2	38	12	12	9	9	3	15	4	1	39	15	14	8	207	18	-	259	22	11	11	2
CASTRO ST.	TR	[illegible]	-	-	-	-	-	-	-	998	-	1	233	-	-	-	-	-	-	-	-	-	-	-	99	-	-
	CUT	116	1	-	2	-	-	-	-	-	-	-	112	-	-	-	-	-	-	-	-	-	-	-	11	-	-
PACIFIC AVENUE	TR	165	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	95	-	-	55	-	-	-	-
	CUT	47	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	96	-	-	-	-
MOTOR COACH LINES	TR	1929	-	-	-	-	-	-	-	-	16	55	12	953	493	-	-	-	365	-	-	-	-	-	-	-	1
	CUT	179	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	172	-
COLLECTORS	TR	887	8	15	3	3	18	5	3	11	17	8	15	8	1	88	69	5	2	76	87	12	99	18	42	22	2
	CUT	[illegible]	36	21	15	71	26	9	4	6	35	15	14	6	15	25	17	19	10	224	29	10	124	39	82	76	98
TOTAL MARKET ST. RAILWAY LINES	TR	49921	2498	2223	1932	2018	4757	2287	1920	2908	4132	1069	2979	1727	2985	4672	3593	2087	2012	7025	3075	2226	9002	1272	2995	3293	1763
	CUT	57335 *1659	2932	2636	1377	1659	2605	1323	1970	787	1759	729	1921	840	1051	934	822	1547	817	3939	1287	1039	5278	954	1931	2024	1399
TOTAL MUNICIPAL RAILWAY		3599				512								10				7			253	1	*1527	8	397		
CALIFORNIA STREET CABLE	CUT	902	361	424	4	130																			5		
GRAND TOTAL ALL LINES		161996	5091	5261	3315	4374	7360	3610	3390	3695	5936	1793	4400	2577	3536	5606	4415	3691	2829	10964	4615	3261	15799	2224	5024	5297	3164

*239 transfers collected on Pacific Avenue line not segregated.

Railway Lines, Wednesday, March 6, 1920

27	28	29	30	32	33	34	35	36	40	41	42	Visit. Valley	10th & Post	Fill. Hill	Divis. Extn.	So. S.F. Pen.	Wash. & Jackson	Powell & Mason	Sacto. & Clay	Castro St.	Pac. Ave.	Motor Coach Lines	Collectors	Total		Originating Line
65	69	283	5	1	17	189	19	15	40	-	1	5	-	192	1	-	398	451	59	38		11	25	6643	IN	1 & 2
5	.	19	-	3	3	4	5	3	6	-	-	4	-	100	-	-	169	113	52	23		-	17	3086	OUT	
28	23	94	2	-	3	41	3	4	5	-	-	-	-	40	-	-	169	152	104	3		1	4	1461	IN	3
1	-	11	2	1	-	3	1	2	2	-	-	-	-	61	2	-	107	30	23	1		2	-	1191	OUT	
27	16	58	1	4	4	56	8	10	17	-	-	-	1	27	2	-	73	106	18	9		3	8	1801	IN	4
9	-	10	3	1	2	-	2	3	8	-	-	-	-	37	24	-	8	17	7	6		2	13	1268	OUT	
82	43	194	7	-	20	171	33	30	43	1	2	2	2	85	5	-	237	308	57	40		5	71	5386	IN	5
38	-	37	4	-	3	16	6	3	32	1	2	1	-	93	-	-	39	13	12	9		4	40	2541	OUT	
43	20	89	15	3	74	70	16	16	30	-	1	3	-	58	2	-	213	189	19	30		10	21	3279	IN	6
16	-	20	5	-	87	6	1	3	17	-	-	-	1	9	-	-	16	12	3	1		3	30	705	OUT	
39	17	79	10	2	88	55	13	9	14	-	-	1	-	56	1	-	113	143	20	39		13	23	2828	IN	7
10	-	3	8	-	4	6	2	2	14	3	-	-	-	10	-	-	13	13	3	1		3	12	663	OUT	
44	32	126	10	1	5	121	8	8	11	-	4	1	1	39	-	-	180	174	20	1		2	17	3017	IN	8
22	-	37	21	-	517	15	3	2	27	4	-	1	-	3	-	-	26	24	6	1575		6	29	3016	OUT	
99	26	128	32	2	46	101	3	5	30	-	5	13	1	40	1	-	284	295	27	22		8	35	4373	IN	9
44	-	30	40	-	24	17	12	19	49	1	1	15	-	3	-	8	23	30	8	6		168	130	2959	OUT	
53	6	51	14	3	52	34	7	2	1	-	-	-	-	28	-	-	11	107	9	9	Transfers collected on this line not recorded	-	21	1606	IN	10
14	-	8	8	-	15	9	1	-	2	1	-	-	-	-	-	-	2	5	1	2		-	3	378	OUT	
51	19	116	72	-	68	85	59	4	40	-	3	19	-	32	-	-	35	40	25	13		18	24	3215	IN	11
28	1	23	48	-	33	16	16	8	12	1	1	1	-	2	-	-	2	-	2	279		4	23	1991	OUT	
126	4	72	32	-	56	44	16	2	43	-	1	11	1	38	-	-	18	32	10	10		73	42	2374	IN	12
43	-	12	14	-	6	6	7	-	7	-	-	1	-	1	-	-	2	2	1	-		345	15	1297	OUT	
162	7	85	34	-	57	67	13	6	-	-	3	22	-	39	-	-	36	54	12	18		51	45	2794	IN	14
48	-	10	14	-	7	5	5	1	2	-	-	179	-	-	-	-	-	-	4	-		385	18	1366	OUT	
141	38	35	28	27	93	34	162	264	35	-	-	6	-	2	-	-	11	23	106	41		39	17	4839	IN	15
31	9	-	2	13	52	23	39	46	7	-	-	1	-	4	-	-	17	8	206	11		9	4	1991	OUT	
32	18	22	26	9	21	17	80	74	12	-	-	124	-	-	-	-	4	1	14	7		15	9	1973	IN	16
31	91	5	82	17	39	23	36	62	1	-	-	6	-	15	-	-	18	4	112	13		9	21	2830	OUT	
25	22	77	12	1	56	67	22	19	14	-	1	3	-	37	-	-	108	107	16	30		8	17	2725	IN	17
14	-	7	29	-	5	5	1	1	21	-	-	6	-	7	-	-	11	11	3	1		20	18	791	OUT	
130	1	14	29	11	43	60	17	3	5	-	2	23	-	47	1	-	77	135	13	11		69	55	2700	IN	18
21	-	-	31	-	5	-	4	1	-	-	-	83	-	4	-	-	-	10	-	-		400	6	1053	OUT	
130	7	60	46	31	68	10	109	173	100	-	-	11	-	1	-	-	184	53	249	70		67	130	8153	IN	19
1	1	4	1	11	8	2	14	10	8	-	-	3	-	7	-	-	151	15	260	8		6	119	2712	OUT	
29	34	66	2	19	11	94	47	74	6	1	1	1	-	54	-	-	80	84	27	11		2	67	2395	IN	20
46	-	1	2	23	48	6	46	55	4	-	-	2	-	36	-	-	70	42	16	9		6	141	3035	OUT	
36	30	109	21	-	10	94	25	10	23	-	-	3	-	57	1	-	124	191	41	27		11	19	3103	IN	21
16	-	10	6	1	5	10	18	1	16	1	-	3	-	14	1	-	19	25	2	6		4	21	1777	OUT	
160	17	168	43	23	81	8	149	162	143	-	1	21	-	17	-	1	8	34	82	151		71	73	7215	IN	22
70	2	8	6	14	93	8	46	63	20	-	-	2	-	411	-	3	173	16	286	59		41	74	6087	OUT	
5	-	3	8	1	5	1	5	2	13	-	-	8	-	11	-	-	-	1	10	7		39	11	806	IN	23
12	-	4	2	6	11	5	3	1	4	-	-	-	-	21	4	-	5	7	34	3		-	53	1209	OUT	
20	14	1	10	1	32	1	7	2	42	-	-	7	-	6	-	-	2	1	2	36		23	14	1286	IN	24
15	2	6	24	2	90	13	12	1	14	-	-	3	-	36	9	-	8	16	6	8		11	86	2223	OUT	
63	3	36	70	19	24	66	164	47	11	-	-	-	1	30	-	-	135	169	14	10		26	53	3297	IN	25
13	-	49	31	-	13	-	60	53	1	-	-	36	-	1	-	-	3	2	-	-		147	4	955	OUT	
31	5	31	9	-	71	46	8	-	-	-	1	3	1	22	1	-	16	37	7	10		7	7	1590	IN	26
17	-	15	3	-	10	5	4	1	11	-	-	1	-	1	-	-	2	-	-	5		6	3	390	OUT	
-	26	57	14	7	15	31	23	9	-	-	1	-	-	5	-	-	9	11	3	7		1	5	1317	IN	27
-	4	7	25	1	1	6	44	9	35	-	-	4	-	3	-	-	1	1	2	-		62	159	1227	OUT	
43	-	57	6	-	2	-	3	3	-	-	-	2	-	-	-	-	1	1	-	-		-	22	388	IN	28
3	-	3	-	7	5	-	4	3	1	-	-	-	-	-	-	-	7	7	23	4		2	1	489	OUT	
45	3	-	48	9	18	5	38	58	9	-	-	6	1	2	-	-	2	-	14	10		10	6	1254	IN	29
28	37	-	67	19	24	13	16	31	2	9	-	-	-	7	-	-	8	6	77	5		9	4	1561	OUT	
14	3	60	-	-	8	-	7	10	4	-	-	2	-	-	-	-	-	-	-	9		13	24	511	IN	30
21	-	43	-	1	6	1	13	18	6	-	-	-	-	1	-	-	7	9	1	3		4	8	673	OUT	
12	6	22	1	-	3	37	1	5	2	-	-	-	1	7	2	-	21	32	3	2		-	4	414	IN	32
5	-	5	2	-	3	3	1	-	7	1	1	-	-	2	-	-	5	3	1	1		-	2	231	OUT	
20	1	37	3	-	-	9	46	34	15	-	1	3	-	2	-	-	6	8	3	69		18	7	1277	IN	33
2	-	-	1	1	-	-	5	2	6	-	-	-	-	1	-	-	-	1	-	187		6	1	751	OUT	
28	-	14	1	9	5	-	43	40	2	1	-	-	1	2	-	-	16	10	29	5		7	41	907	IN	34
4	-	5	-	7	5	-	6	9	1	-	-	1	-	1	-	-	8	10	17	7		2	41	459	OUT	
28	1	74	2	-	33	58	-	6	7	-	-	-	2	11	-	-	4	10	10	12		2	8	1178	IN	35
23	-	14	10	1	16	9	-	6	2	-	-	-	-	2	-	-	1	-	1	1		1	2	481	OUT	
7	-	82	3	-	17	68	9	-	7	-	3	-	-	3	-	-	11	2	6	-		-	11	1039	IN	36
12	-	17	7	1	22	8	8	-	6	-	-	-	-	-	-	-	2	1	-	1		4	15	439	OUT	
35	-	7	11	7	8	18	12	1	-	-	-	23	-	20	-	-	21	46	8	12		19	11	1163	IN	40
1	-	-	1	-	3	-	-	1	-	-	-	23	-	-	-	7	-	-	-	-		63	-	151	OUT	
14	3	7	-	1	-	-	-	-	-	-	-	-	-	-	-	-	4	10	-	-		-	2	149	IN	41
1	-	3	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-		-	1	29	OUT	
-	3	1	-	2	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-		-	2	29	IN	42
-	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		1	-	21	OUT	
3	-	1	1	1	11	4	8	9	16	-	-	-	-	-	-	-	36	3	52	11		5	29	1553	IN	Fillmore Hill
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-		-	-	1	OUT	
1	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-		-	-	13	IN	10th & Post
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	11	OUT	
-	-	-	-	-	-	-	-	-	41	-	-	-	-	-	-	-	-	-	-	-		7	-	366	IN	Visitacion Valley
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	156	OUT	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	17	IN	Divisadero Extn.
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	18	OUT	
-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-		-	-	8	IN	So. San. Fr. J.
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-		OUT	
4	6	5	2	8	9	118	4	6	31	4	-	1	-	-	-	-	-	23	59	11		13	52	1966	IN	Wash. & Jacks.
1	-	1	1	2	1	11	2	3	1	-	-	-	-	68	-	-	-	1	372	7		-	3	1586	OUT	
4	-	5	6	8	8	5	4	4	45	-	1	4	-	2	-	-	40	-	84	17		7	65	2074	IN	Powell & Mason
-	-	-	-	-	-	4	-	-	-	-	-	-	-	4	-	-	4	-	307	-		1	-	937	OUT	
1	18	98	-	-	-	11	3	2	-	-	-	-	-	1	-	-	83	124	-	1		-	1	758	IN	Sacto. & Clay
-	-	9	-	3	-	7	5	1	-	-	-	-	-	81	-	-	270	105	-	2		-	6	1371	OUT	
-	-	-	-	-	207	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	271	1759	IN	Castro Street
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	116	OUT	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	2	-	-	-	-	-		-	-	165	IN	Pacific Avenue
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	49	OUT	
-	-	-	-	-	-	-	-	-	79	-	-	-	-	-	-	-	-	-	-	-		-	-	1429	IN	Motor Coach Lines
-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-		-	-	174	OUT	
75	12	50	8	-	7	31	8	1	1	-	1	-	-	12	1	-	31	43	9	2		3	-	887	IN	Collectors
38	-	23	17	2	35	7	9	3	15	-	-	9	-	20	-	-	44	22	17	110		133	-	1923	OUT	
1962	553	2574	644	210	1356	1827	1204	1130	939	7	33	328	13	1032	20	1	2801	3218	1241	811	{239}	677	1369	99421	IN	Total Market St. Railway Lines
774	149	460	518	137	1201	272	457	428	367	22	5	387	1	1066	40	18	1212	581	1865	2349		1875	1129	57335 (239)*	OUT	
														812									70	3599		Total Municipal Railway
																								902	OUT	California Street Cable
2736	702	3034	1162	347	2557	2099	1661	1558	1306	29	38	715	14	2910	60	19	4013	3792	3106	3160	239	2552	2563	161996		Grand Total All Lines

+1527 Mun. Ry. transfers collected on lines 22 and 23 on Fillmore Street at Geary.

to them the two figures appearing where the second line as issuing line crosses the first as collecting line. The sum of these four figures represents the total interchange of transfers between the two lines.

Checking the Traffic

The Market Street Railway has no records giving the volume of traffic on the various parts of the routes being operated. The annual volume of traffic by lines does not give this information, neither does the analysis of transfer movements. As this information was vital to the preparation of a new scheme of routing and to a readjustment of schedules it was essential that this data be obtained by direct observation on the streets and on the company's cars.

Such information has been secured on some systems through requesting passengers to fill out blanks which were handed them as they boarded the cars. These blanks contained spaces for showing the boarding point and the destination together with the route which the passenger proposes to use. Careful consideration of this method showed it to be impractical on account of the labor necessary to pass out and collect the questionnaires, assist in filling them out and to summarize and tabulate them.

There remained a second method of securing suitable information for our purpose, namely by means of a riding count and by point checks and these two methods have been employed.

Observers were placed on a sufficient number of cars to secure a representative count of the number of passengers boarding and alighting from the cars of a route at each stop between terminals. In additon to taking this data the observers recorded the running time and the time required between selected points including the principal transfer intersections. This information when tabulated, summarized and plotted produces a mass diagram of the net load at every point on the route. It also shows the number of passengers getting on or off at each stop.

By plotting the numbers boarding and leaving the cars on the basis of the percentage of the total there is shown the proportion of the line's total traffic originating on any section of the route and likewise the proportion destined to any section. From this data it was possible to determine very closely the use being made of each portion of a line, thus furnishing data for making a study of rerouting to more accurately meet the requirements of the patrons. It also permitted making calculations for schedule adjustments in the interest of economy.

It was impossible to place an observer on each car of a route so that while the characteristics of a line were definitely secured, data was not obtained to determine actually the total volume of traffic. An average of six observers was used on each line between the hours of 6 A. M. and midnight on the days selected for the check. These men could cover but six of the total number of cars in service on a route. In order to obtain the total volume of traffic a second method of check known as the "cordon count" or "point check" was employed.

To make this count six salient points were selected on each route. At these points an observer was stationed from 6 A. M. to midnight on the date chosen. These observers made a complete record of the cars passing them, showing the car number, number of passengers carried, and the time. Their records give accurate data of the running time on the route checked for all hours of the day and show the relation between the number of seats provided and the number of passengers carried. The data so secured have been summarized and charted showing the flow of traffic past each observer's station.

From these charts can be determined the adequacy of the service at each of the locations. This information was used in studying the possibilities of rearrangements of schedules.

Both riding and point checks were made on representative week days, and on certain lines where it was found advisable, additional checks were made to show the Saturday travel.

Between October 29, 1928, and May 1, 1929, twenty-four days of rain or storm prevented the traffic from being representative. In additon to interfering with the normal traffic, condensation on the windows and the use of storm curtains prohibited the counting of passengers in point checks. On such days as far as possible the field force was utilized in the office. The occurrence of rain after the commencement of a check necessitated the cessation of field work and required the repetition of the check at a later date.

An epidemic of "flu" proved a very serious handicap as it took several men out of the organization for three or four days at a time. So far as possible these unavoidable absences were covered with emergency observers but it was not always possible to efficiently fill the gap.

It required several days for a man to become proficient in the work of observation so that only men employed in the office who had had field experience were suitable for this work. Therefore the use of these men in the field slowed up the office work. The observers released from field work were used in the office in tabulating and summarizing the survey data and making transfer analysis.

A certain number of men was required to supervise the work. The hours of work were not congenial to the average man so that in order to maintain the force of seventeen men required to carry on the work it was necessary to employ during the period covered by the field work no less than thirty-five men. One or two draftsmen and an office assistant were also necessary.

The supervisors saw that each man was at his post and checked his watch so that each observer carried standard time.

No small part of the work was that of selecting the days on which the checks of the line were to be made and arranging the men so that they would ride on representative trips. It was also necessary to carefully select the points at which cordon counts were to be made. This work required a close study of the Market Street Railway's timetables. General supervision of the survey work was ably handled by Mr. Douglas under Mr. Campbell's direction.

The routes of the Market Street Company were checked in the following order:

1. Cable lines.
2. Cross-town electric lines.
3. Main electric routes.
4. Motor coach routes.

A complete synopsis of the program used in the point and riding checks of all lines is given in Table XXVI.

Through the courtesy of Mr. Samuel Kahn, President of the Market Street Railway Company, and Mr. A. W. Brohman, Superintendent of Transportation, every facility desired was accorded and free transportation was provided for the men engaged in the traffic survey.

Only the lines of the Market Street Railway were covered by this survey. Neither time nor funds available permitted securing similar data for all of the Municipal Railway lines. Two Municipal Railway lines were checked in connection with the survey made of the California Street Cable Railroad, viz. the "C" and "F" lines.

Mr. Fred Boeken, Superintendent of the Municipal Railway placed at our disposal such information as he had covering the Municipal Railway Service.

TABLE XXVI.

SYNOPSIS OF PROGRAM.
FOR CHECKING TRAFFIC ON STREET CAR LINES OF THE MARKET STREET RAILWAY COMPANY.

Route Numbers	Names of Lines	Checking Dates: Point Check	Checking Dates: Ride Check
	Cable Lines		
	Washington and Jackson Streets	10/29 to 11/1/28	11/8–11/10
	Powell and Mason Streets	11/2 to 11/7	11/13–11/16
	Sacramento and Clay Streets	11/17–11/21	11/22–11/24
	Castro Street	2/26	3/7–3/8
	Pacific Avenue		1/23–26
	Cross Town Electric Lines		
15.	Kearny Street and North Beach	1/23–26	1/24–25
16.	Third and Kearny Streets	1/14–15–19–21–22	1/16–17–18
19.	Ninth and Polk Streets	12/26–29, 1/5	12/28–1/4
20.	Fourth-Ellis and O'Farrell Streets	1/7–8–12	1/9–10–11
22.	Fillmore and Sixteenth Streets	12/3–4–8–15	12/5–12/7
23.	Fillmore and Valencia Streets	11/26–27 and 12/1	11/28–11/30
24.	Mission and Richmond	12/17–18, 12/22	12/19–21
29.	Third-Kearny Streets and Broadway	1/14–15–19–21–22	1/16–17–18
34.	Sixth and Sansome Streets	12/31–1/3/29	12/31–1/3
	Tenth and Post Streets		5/8–5/9
	Fillmore Street Hill	12/3–4–8–15	12/5–7
	Divisadero Street Extension		5/8–5/9
	Main Line Electric Lines		
1.	Sutter and California Streets	1/28–2/2–2/9	1/30
2.	Sutter and Clement Streets	1/28–2/2–2/9	1/31
3.	Sutter and Jackson Streets	1/29–2/16	2/1–2/4
4.	Turk and Eddy Streets	2/5–2/11	2/6
5.	McAllister and Fulton Streets	2/7–2/13–2/23	2/8
6.	Haight Street and Masonic Avenue	2/18	2/20
7.	Haight Street and Ocean	2/19–3/2	2/21
8.	Market Street	2/26	2/27
9.	Valencia Street	2/26	2/28–3/1
10.	Guerrero Street-Sunnyside	3/5	3/11–3/14
11.	Mission and Twenty-fourth Streets	3/21	3/25
12.	Mission Street and Ingleside	3/18–3/22	3/28
14.	Mission Street-Daly City (To Ferries)	3/6	3/15
17.	Haight Street and Ingleside	2/19–3/2	2/25

TABLE XXVI (Continued).

SYNOPSIS OF PROGRAM.
FOR CHECKING TRAFFIC ON STREET CAR LINES OF THE MARKET STREET RAILWAY COMPANY.

Route Numbers	Names of Lines	Checking Dates: Point Check	Checking Dates: Ride Check
18.	Mission Street-Daly City (To Fifth and Market Streets)	3/6	3/19
21.	Hayes Street	2/14	2/15
25.	San Bruno Avenue	4/1	4/9
26.	Guerrero Street and Daly City	3/5	3/12–13
27.	Bryant Street	4/8–4/11	4/17
28.	Harrison Street and Depots	4/11	4/17
30.	Eighth and Army Streets	4/10–4/16	4/22
32.	Hayes and Oak Streets	2/14	3/7–3/8
33.	Eighteenth Street and Park	3/27	4/12
35.	Howard Street	3/20	4/2
36.	Folsom Street	3/26	4/3
40.	San Mateo	4/15	4/18–19
41.	Second and Market Streets—S. P. Depot	4/8–4/11	4/25–26
42.	First and Fifth Streets Visitacion Valley	4/29–30	5/8–9 4/8
	Motor Coach Lines		
	Crocker-Amazon		4/22–25
	Excelsior		4/22–25–5/7
	Mission Street and San Bruno Avenue		4/22–25
	Municipal Railway Lines		
C.	Geary and California Streets		12/12–14
F.	Stockton Street		12/10–11
N.	Judah Street	12/11	

CHAPTER VII.

MUNICIPAL OPERATION OF PRIVATE SYSTEMS.

There are two ways by which the municipality may take over and operate the properties of the Market Street Railway Company and the California Street Cable Railroad. First, through piecemeal acquisition, and second, through acquiring the entire property and establishing a unified system.

Piecemeal Acquisiton.

The map, page 26, "Franchise Expirations," shows by the heavy lines the streets on which franchises expire in 1929, and by the line with circles the streets on which there are no franchises or where they are revocable or on which the franchise status is doubtful. It is readily seen that the majority of the important routes will be affected by these expirations.

The following important streets are among those for which franchises expire during 1929:

Market Street, entire length.
Valencia Street, entire length.
Mission Street, entire length.
Howard Street, entire length.
Third Street, Market to Berry.
Fourth Street, Market to Townsend.
Fifth Street, Market to Brannan.
Sixth Street, Market to Brannan.
Ocean Avenue, entire length.
Sutter Street, entire length.
Turk Street, Fillmore to Market.
McAllister Street, Presidio to Market.
Hayes Street, Stanyan to Market.
Haight Street, Stanyan to Market.
Lincoln Way, entire length.
Sansome Street, entire length.
Polk Street, North Point to Sutter.
Larkin Street, Post to Market.

Many possibilities present themselves for establishing municipal routes over these streets. To take over these tracks for the exclusive use of the Municipal Railroad would effectually cut off service from practically every district to the business center. This would mean that for the City to give the same service it would be necessary to take over a considerable number of other lines and establish a transfer agreement with the remaining lines of the Market Street system. Failure to make such a transfer agreement would require a large part of the patrons to pay a double fare.

The result of piecemeal acquisiton of the portions of the system for which the franchises are expiring would be immediate unsatisfactory service to the public with possibly double fares and eventually the abandonment of service on many of the remaining lines whose franchises the Company would still hold, and which it could not afford to operate.

It must be pointed out that should the City attempt to acquire the system piecemeal it would be necessary not only to purchase the track and roadway but also to provide, either by purchase or construction, cars, carhouses, shops, power supply and other necessities for giving street railway service.

The uninterrupted maintenance of adequate street railway transportation is of prime importance to the welfare and growth of the City regardless of whether it is given by the municipality or a private company. It is, therefore, essential that nothing be done to impair the standard of service enjoyed by the different sections of the City. It is very probable that piecemeal acquisition would result in a higher ultimate cost than the purchase of the entire properties.

For these reasons it has been felt desirable to consider at this time only plans dealing with the acquisition and operaton of the systems as a whole, leaving the possible piecemeal acquisition to be considered only with respect to a few of the individual lines in the event that a general consolidation and unification cannot be effected.

Combined Systems

With the data obtained through the traffic survey it was possible to project a new routing plan, making use of all the information available. Before commencing the discussion of the rerouting plans, attention should be directed to the following considerations which have had much influence in determining the routes to be presented:

1. Routes which might be adandoned—
   (a) On account of duplication.,
   (b) On account of insufficient traffic.
   (c) To improve traffic routes for vehicles.
2. Rerouting with Municipal Railway lines.
3. Rerouting with California Street Cable Railroad lines.
4. To utilize tunnels.
5. To relieve traffic congestion on Market Street.
6. To replace rail with bus lines.
7. To eliminate transferring as much as possible.

All of this work was done with the expectation of utilizing the trackage of the Market Street Railway Company, the Municipal Railway, and the California Street Cable Railroad as one complete system.

Track Abandonment

(a) It was thought desirable to abandon certain streets because of the existing duplication of service.

Clement Street

Consideration was given to the advisability of taking the cars off Clement Street through the Richmond District. At present the Municipal Railway operates on Geary Street, the Market Street Railway Company on Clement Street, and the Municipal Railway again on California Street, making three lines a block apart on parallel streets with a spacing of four blocks between the Geary Street Line and the Fulton Street Line.

Clement Street for a considerable distance has developed into a business thoroughfare and the discontinuance of the car service on this street would, without doubt, work considerable hardship on a large number of people. In view of these conditions it is felt that the continued use of Clement Street is warranted and, as will be indicated under the details of the proposed routes, it will be seen that the service under the proposed plan would, if anything, be improved in the section between Sixth and Tenth Avenues.

Ellis Street and Eddy Street

Ellis Street and Eddy Street from Market Street to Divisadero Street carry single track lines. The double-tracking of O'Farrell Street, which is proposed, will

eliminate the necessity for tracks on Ellis Street, which is the next street south of O'Farrell Street. It is proposed eventually to double-track Turk Street in order to provide through service from Market Street to the Richmond District via Balboa Street. When this is done there will no longer be a necessity for the single track now on Eddy Street.

Van Ness Avenue and Polk Street

The duplication of service by parallel lines on Van Ness Avenue and on Polk Street has often been pointed out and consideration was given to the abandonment of one or the other of these two lines. Table XXIII shows that the Polk Street Line is fifteenth in the number of revenue passengers carried and sixth in the total number of passengers carried. The Van Ness Avenue lines of the Municipal Railway, "H" and "D," rank twenty-third and twenty-eighth respectively, in the number of revenue passengers carried and twenty-eighth and twentieth respectively, in the total number of passengers carried. These facts, together with the proposal to move the cars operated on California Street via Van Ness Avenue, justify the continued operation of the tracks on both streets. The Polk Street Line carries approximately 11,000,000 passengers a year, while the two Municipal lines on Van Ness Avenue carry approximately 12,000,000 passengers. This volume of traffic is sufficient to warrant the retention of both double-track lines.

Howard Street

Howard Street from the Embarcadero to Twenty-sixth Street is paralleled on one side by Mission Street and on the other side by Folsom Street. The comparative receipts for this line for the past five years show a gradual decline in the amount of business. This street can be most advantageously utilized for a vehicular thoroughfare. It is therefore recommended that all of the tracks on Howard Street be abandoned except for the one block between Steuart Street and the Embarcadero over which it will be necessary to operate two of the proposed routes. Howard Street thus falls within three of the classifications calling for abandonment, namely: duplication, to provide an improved vehicular route, and on account of insufficient business.

Columbus Avenue-Washington Street-Jackson Street

The Market Street Railway maintains a track on Broadway from Columbus Avenue to the Embarcadero. The Municipal Railway is operating its "E" Line over single tracks on Washington Street and Jackson Street from Columbus Avenue to the Embarcadero. These tracks go through the commission district on narrow streets, where considerable difficulty is experienced and where a loss of time is occasioned by the heavy traffic. There is no question that the business on these streets also suffers some inconvenience on account of the operation of the cars.

By rerouting the "E" Line from Columbus Avenue to the Embarcadero over Broadway it will be possible to abandon the Municipal Railway track on Columbus Avenue from Broadway to Washington and on Washington from Montgomery to the Embarcadero, and on Jackson Street from Columbus Avenue to the Embarcadero. This will in no manner impair the service but, on the contrary, will make it possible to render a more reliable service on a better schedule. Traffic checks indicate that almost no passengers either board or leave the cars betwen Columbus Avenue and the Embarcadero on Washington and Jackson Streets, indicating that the passengers are desirous of reaching the Ferry and that the rerouting proposed via Broadway will reduce the running time. It will also decrease the number of miles of track which will have to be maintained, thereby cutting the cost of track and roadway maintenance.

Pacific Avenue

The Pacific Avenue Cable between Polk Street and Divisadero Street carried during 1928 an average of 613 passengers per day with an annual revenue of $7,110.58 showing a loss of $21,805. It might prove more desirable to substitute a bus service on account of the traffic being insufficient to sustain a rail line.

Bosworth Street

The daily average number of passengers carried on the Bosworth Street Line was 216, with an annual revenue of $2,124.12. The loss on this line was$7,337. Mission Street service is to the east of this route and the San Jose Avenue lines are crossed. Under a unified operating plan it would therefore seem advisable to abandon this service. No cars have been operated on this route since November 21, 1928, on account of the construction of the Bernal Cut, and no serious inconvenience has been observed through this cutting off of service.

Tenth Street

The line operating on Tenth Street, thence via a circuitous route to Post Street, carried an average of sixty-eight passengers per day with a revenue of $910.20 for the year showing a loss of $7,271.

Post Street

Service will be furnished by another route, and good service provided on Ninth Street. The Municipal Railway "H" line operates on Eleventh Street. It therefore seems advisable to abandon the service on Tenth Street from Market to Bryant, and on Post Street and the connecting streets between Post Street and Market and Polk Streets. The tracks on Leavenworth Street from Post to McAllister and Post Street from Leavenworth to Taylor should not be abandoned as they provide an emergency routing which might become serviceable for possible future loop operation.

The abandonment of the track on Tenth Street opens up a through automobile route free of cars from Division Street to Market connecting with the Bay Shore Highway via Potrero Avenue and forms a direct route from the County Line to Market Street.

Twenty-second Street

The tracks on Twenty-second Street between Mission and Howard will no longer be of service after the abandonment of the Howard Street Line.

The proposed reroutings make it unnecessary to retain the tracks on Eighth Street from Bryant to Brannan, on Brannan Street from Sixth Street to Eighth Street, on Harrison Street from Ninth Street to Third Street, and on Army Street from Folsom Street to Bryant Street.

As is more fully discussed under "Changes in Routing to Relieve Market Street," it will be possible to abandon the present Market Street inner tracks from Valencia Street to Castro.

Four tracks were placed on Church Street from Market to Sixteenth Street on account of the inability to reach a satisfactory agreement with the United Railroads in connection with the joint use of this track. With the combination of systems this four track stretch will not be required as two tracks are ample to carry all service.

The lengths of the tracks to be abandoned are given on Table XXVII.

The tracks shown in Table XXVIII will no longer be required for the operation of the proposed routes but it is believed that they should not be abandoned for the reasons set forth in the table.

TABLE XXVII.

PROPOSED TRACK ABANDONMENTS.

MARKET STREET RAILWAY

Street	From	To	Miles of S. T.
Howard Street	Steuart	26th	6.884
Tenth Street	Market	Bryant	1.128
Eighth Street	Bryant	Brannan	.088
Brannan Street	Sixth	Eighth	.344
Harrison Street	Ninth	Third	1.065
Polk Street	Market	Hayes	.179
Ellis Street	Market	Divisadero	2.307
Bosworth Street	Mission	Burnside	.753
Army Street	Folsom	Bryant	.255
Pacific Avenue	Polk	Divisadero	2.282
22nd Street	Mission	Howard	.209
Market Street (Inner Tracks)	Valencia	Castro	1.911
Hyde Street	Ellis	O'Farrell	.062
Ultimate Abandonment when Turk Street Double Tracked and Balboa Line Built			
Eddy Street	Market	Divisadero	1.758
Mason Street	Turk	Eddy	.060
MUNICIPAL RAILWAY			
Columbus Avenue	Broadway	Washington	.500
Washington Street	Montgomery	Embarcadero	.420
Jackson Street	Columbus	Embarcadero	.430

TABLE XXVIII.

SERVICE ABANDONED—TRACK NOT ABANDONED.

MARKET STREET RAILWAY

Line	From	To	Reason for Retaining Track
Fifth Street	Mission	Bryant	Emergency re-routing or possible future service.
Brannan Street First Street	Second Brannan	First Townsend	To give access to Mail Dock
Leavenworth Street Post Street	Post Leavenworth	McAllister Taylor	Emergency re-routing or possible future loop.
Broadway	Powell	Mason	Service cars to Mason and Washington Streets Cable Car House
Masonic Avenue Stanyan Street	Oak Frederick	Haight Carl	For pull-out and pull-in to Car Barn
Brannan Street	Third	Fourth	Emergency re-routing
MUNICIPAL RAILWAY			
Second Avenue Cornwall Street	Geary Second Avenue	Cornwall Sixth Avenue	For pull-out and pull-in to Geary Street Barn

Rerouting with Municipal Lines

No special plans are necessary in order to utilize the lines of the Municipal Railway other than are touched upon under the heading "Utilization of Tunnels" and the "Abandonment of the Center Tracks on Market Street West of Valencia" as indicated under the proposed new routes.

At a number of places the tracks of the Municipal Railway lines are already connected to track now owned by the Market Street Company.

Rerouting with California Street Cable Railroad

In the report on the California Street Cable Railroad submitted in December, 1928, definite plans were made for the abandonment of cable operation on California Street west of Van Ness Avenue and for the establishment of electric service in place of cable service. Recommendations were also made in this report for the abandonment of the cable tracks on O'Farrell from Market Street to Jones Street and for the construction of electric tracks in their place. These plans have been carried forward into the general rerouting scheme now being submitted.

Utilization of Tunnels

Three tunnels, the Stockton Street, Twin Peaks, and Sunset Tunnels have been built through the creation of local assessment districts for the purpose of connecting level portions of the city separated by high and steep hills.

The Stockton Street Tunnel, 900 feet long, accommodates pedestrians and vehicular and street car traffic. The Twin Peaks Tunnel, 12,000 feet long, and the Sunset Tunnel, 4,200 feet long, provide only for street car traffic.

None of the Market Street Railway Lines operate through these tunnels.

In our studies to develop a plan for unified operation we have considered that these tunnels would be utilized by any lines naturally tributary thereto where such use would result in the best service to the public.

No additonal lines can advantageously be brought through the Stockton Street or Twin Peaks tunnels at this time but when the district west of Twin Peaks is further developed it will be necessary to add new lines through the latter tunnel. At the present time the "K" and "L" service readily handles all of the traffic from this district. Transfer privileges between the lines of the Municipal Railway and those of the Market Street Railway have been in effect at St. Francis Circle for several years. This exchange of transfers adequately provides for all transportation requirements west of Twin Peaks.

The Sunset Tunnel offers a more direct route downtown for the Market Street Company's No. 7 line and the outer end of the present No. 6 line. The Sunset tunnel can best be utilized by the No. 7 line by the construction of three blocks of track, namely—two blocks on Frederick Street from Stanyan to Cole and one block on Cole Street from Frederick to Carl. A less satisfactory connection might be made via Arguello Boulevard from Lincoln Way to Carl Street or via Stanyan Street from Frederick Street to Carl Street. Either of these latter methods would involve operating the cars up fairly heavy grades and require turning the cars at grade breaks in such a manner as to make the operation undesirable. No expenditures will be required to route the No. 6 line through the tunnel as track connections are already available over which the Municipal "N" line now operates.

Further improvement of the connection for the No. 7 line via Frederick Street from Stanyan to Cole could be had by making an entrance directly into the west portal of the Sunset tunnel through the acquisiton of additional property now facing Cole Street. In this report we have estimated on routing the cars to the Sunset tunnel via the intersection of Carl and Cole Streets.

To Relieve Market Street

Attention has already been called to the fact that lower Market Street is carrying more cars than are necessary. There are two reasons for this, namely, the location of the ferries at the foot of Market Street and the inability to create a street north of and parallel to Market Street. This has led to the premature advocacy of a subway on Market Street. The City is now engaged in planning for a transbay bridge. Should the bridge be constructed on the Recommended Location No. 1, or Alternate Location No. 2, the entire traffic situation on lower Market

Street would be changed as both of these schemes call for the establishment of an elevated loop south of Market Street which would greatly relieve lower Market Street from pedestrian traffic. The loop would extend along Tehama Street from Fremont to Seventh Street, returning in the No. 1 scheme via Bryant Street. There will be several stations on either of these loops which will eliminate the concentration of the enormous transbay traffic at any one point such as now exists at the Ferry. The foot of Market Street will no doubt continue to be an important loop point as there is no question that some of the trunk line steam service and possibly the Marin County commuter and steam train traffic will still continue to be handled from this location.

We may only speculate as to the disposition of the Marin County service after the East Bay Bridge is completed. In order to compete with the quicker time to the East Bay District, it may be necessary for the Marin District to secure a bay crossing requiring less time than the present route. Such a crossing would naturally have to be made from some point along the north shore of the San Francisco peninsula, perhaps somewhere near the north end of Van Ness Avenue. The possibility of breaking up the concentration of traffic at the present Ferry Building puts an entirely different aspect on the Market Street subway situation and no subway plans should be made without taking these contingent factors into consideration.

Transbay stations distributed between Fremont Street and Seventh Street south of Market will require rerouting of cars across to the south side of Market Street rather than on to and along that thoroughfare, thus greatly reducing the Market Street traffic. It may then be possible to reduce the Market Street service to a point where it can be handled satisfactorily by two tracks in place of the present four.

The immediate construction of a subway along Market Street terminating at the Ferry Building would not tap the proposed Rincon Hill bridge terminal and upon the completion of the bridge would not be utilized to full capacity.

With the advent of the bridge and the continued growth of the Peninsula commuter traffic, it is probable that a relatively short cross-town subway connecting the Third and Townsend Street Station and the transbay terminal loop with the financial district and all east and west street car lines would prove much more satisfactory and economical than the Market Street Subway.

That the solution of the Market Street traffic situation is very definitely related to transbay traffic is very clearly shown by considering for a moment the change in Market Street traffic which could be brought about by moving the present Ferry service and Ferry Building even two blocks south to the foot of Howard Street. This would make it possible to divert from Market Street all of the transbay traffic allowing that street to be used largely for local traffic originating on or north of Market Street.

Under present conditions eight Municipal and twelve Market Street lines, a total of twenty lines, are operated to the Ferry. During the peak hour the point of present maximum congestion is at the intersection of Market, Kearny, Geary and Third Streets. It is essential that as much service as possible be cut off Market Street east of this intersection. More cars than are necessary are now operated between this point and the Ferry, and curtailment of service will be of no disadvantage but will materially improve operating conditions and result in economy of operation.

By the reroutings proposed, the number of lines operating to the Ferry may be reduced. The following table shows the number of routes now operated and the number which would be operated under the suggested plan.

Section of Market Street	Number of Routes At Present	Number of Routes Proposed
Embarcadero to First Street	20	12
First Street to Sutter Street	20	13
Sutter Street to Geary Street	17	11
Geary Street to Fourth Street	13	9
Fourth Street to Eddy Street	13	10
Eddy Street to Fifth Street	12	10
Fifth Street to McAllister Street	12	11
McAllister Street to Hayes Street	11	10
Hayes Street to Twelfth Street	9	8
Twelfth Street to Haight Street	9	9
Haight Street to Valencia Street	6	7
Valencia Street to Duboce Avenue	5	6
Duboce Avenue to Church Street	4	4
Church Street to Castro Street	3	3

The present and proposed distribution of cars on Market Street is shown graphically on the chart (Page 84).

These changes would be accomplished by routing some of the lines now operated to the Ferry across Market Street and into the territory south of that thoroughfare, also by routing some of the lines to a point of contact with Market Street, thence north over another street, as illustrated by the rerouting of the "D" line and the connection of the "A" line with the "F" line.

Further changes in routing, looking toward clearing lower Market Street, are the diversion of lines from Market Street at Fourth Street and Fifth, also the routing of the Church Street line off Market Street to Mission Street via Twelfth Street.

The present service requirements on Market Street, as far west as Valencia Street, are now so heavy as to make operation unsatisfactory with less than four tracks. The "four track bugaboo" has been exploited in certain quarters by subsidized agitators to the detriment of the City. Actual operating experience has proved the service to be as safe as that on other streets. In fact, considering the amount of traffic, the number of accidents is relatively small. There is at times some inconvenience and strangers in the City are sometimes timid about crossing the street. They are, however, no more timid about crossing Market Street than are out-of-town automobile drivers about driving through the City streets.

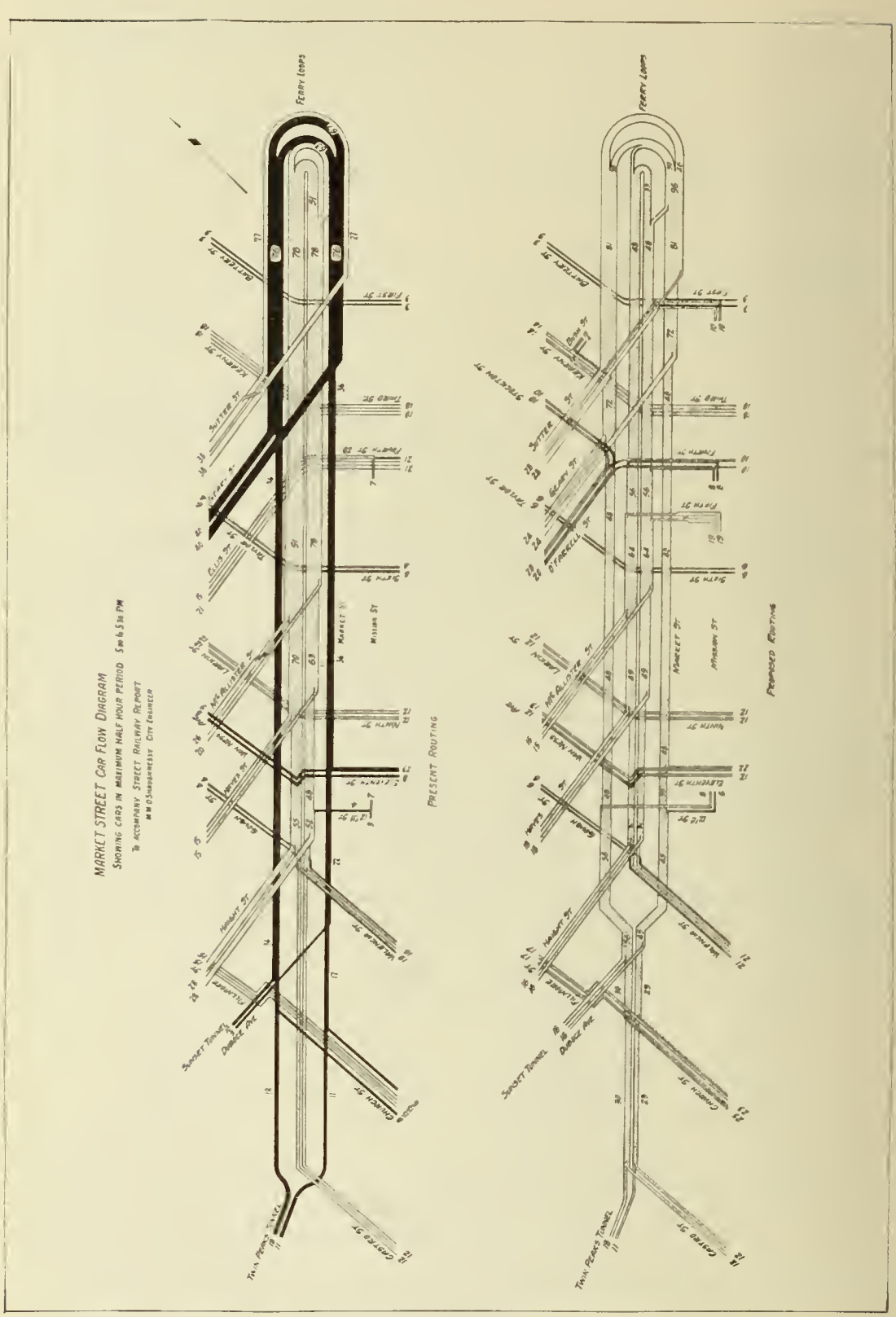
The false propaganda that business is hurt by four tracks on Market Street is refuted by the following tabulation of the growth of the business of the Emporium, which shows a doubling of volume in the ten-year period, 1918-1928, or since Twin Peaks Tunnel cars have operated on the outer tracks on Market Street.

Sales of the Emporium

1915	$ 7,433,436	1922	$16,760,453
1916	7,417,075	1923	18,205,127
1917	8,670,482	1924	17,916,887
1918	10,126,042	1925	18,740,631
1919	13,509,024	1926	19,671,749
1920	15,734,517	1927	19,734,934
1921	15,499,682	1928	20,686,630

It will be possible, when rebuilding the tracsk on Market Street, to secure more uniform spacing by decreasing the center to center spacing of the inner tracks.

Under the rerouting plans it will be possible to dispense with two tracks west of Valencia Street, as a double track line is ample to carry all of the cars west of that point. This change would best be handled by the abandonment of the Market Street tracks in the center and moving the Municipal Railway tracks over to the center positon for the reason that the Market Street tracks are in such condition that they would soon require reconstruction, while the Municipal tracks are


MARKET STREET CAR FLOW DIAGRAM
SHOWING CARS IN MAXIMUM HALF HOUR PERIOD 5 to 5:30 PM
TO ACCOMPANY STREET RAILWAY REPORT
OF SAN FRANCISCO CITY ENGINEER
PRESENT ROUTING
PROPOSED ROUTING
FERRY LOOPS
MARKET ST
MISSION ST
MARKET ST
MISSION ST
TWIN PEAKS TUNNEL
SUNSET TUNNEL
TWIN PEAKS TUNNEL
SUNSET TUNNEL

relatively new. To abandon the inner tracks and operate on the outer tracks only would leave the use of the center of the street to automobiles. This would greatly increase the number of collisions between street cars and automobiles and make the street unsafe for pedestrians on account of the high speed of the automobiles running between the street car lines.

Replacing Rail with Bus Lines

The various lines of the Market Street Railway have been viewed with the possibility of abandoning the car service and substituting therefor automobile bus service. This substitution has been found undesirable in every case.

There has been a great deal of publicity given to the possibility that automobile buses would eventually replace street car service. A number of street railway lines have put on heavy bus service but it has not proved as economical or as satisfactory as was expected. Present indications throughout the country are that the use of automobile buses, in place of established rail lines, will not materially increase. With the steep grades in our San Francisco streets it will never be practicable to substitute buses for street cars. Any line providing sufficient traffic to warrant bus service, moving more than one hundred and twenty people an hour, can be more economically and more satisfactorily served by a street car line.

The cost per seat of operating buses is relatively high and the service is not entirely reliable. For these reasons it is not advisable to use buses except for feeder service to outlying districts where the traffic is very light and not likely to expand, or where conditions prohibit the extension of street railway lines. With the most modern buses now on the market it would be impossible to replace satisfactorily the service now given by the street cars on any of the heavily traveled lines.

We shall always have electrically operated street cars in San Francisco. For safety our steep grade hills must, under present conditions, be operated by cable cars and automobile buses will never render satisfactory service.

Rerouting to Decrease Transferring

The data which has been set up in tabular form on Table XXV was given careful consideration in connection with the studies for the rerouting of the various street railway lines and as far as consistent the proposed routes have been laid out to eliminate as many transfers as possible.

The table shows that the cross-town lines are the lines picking up and issuing the largest numbers of transfers. No route can be laid out to efficiently replace the service rendered by these cross-town lines.

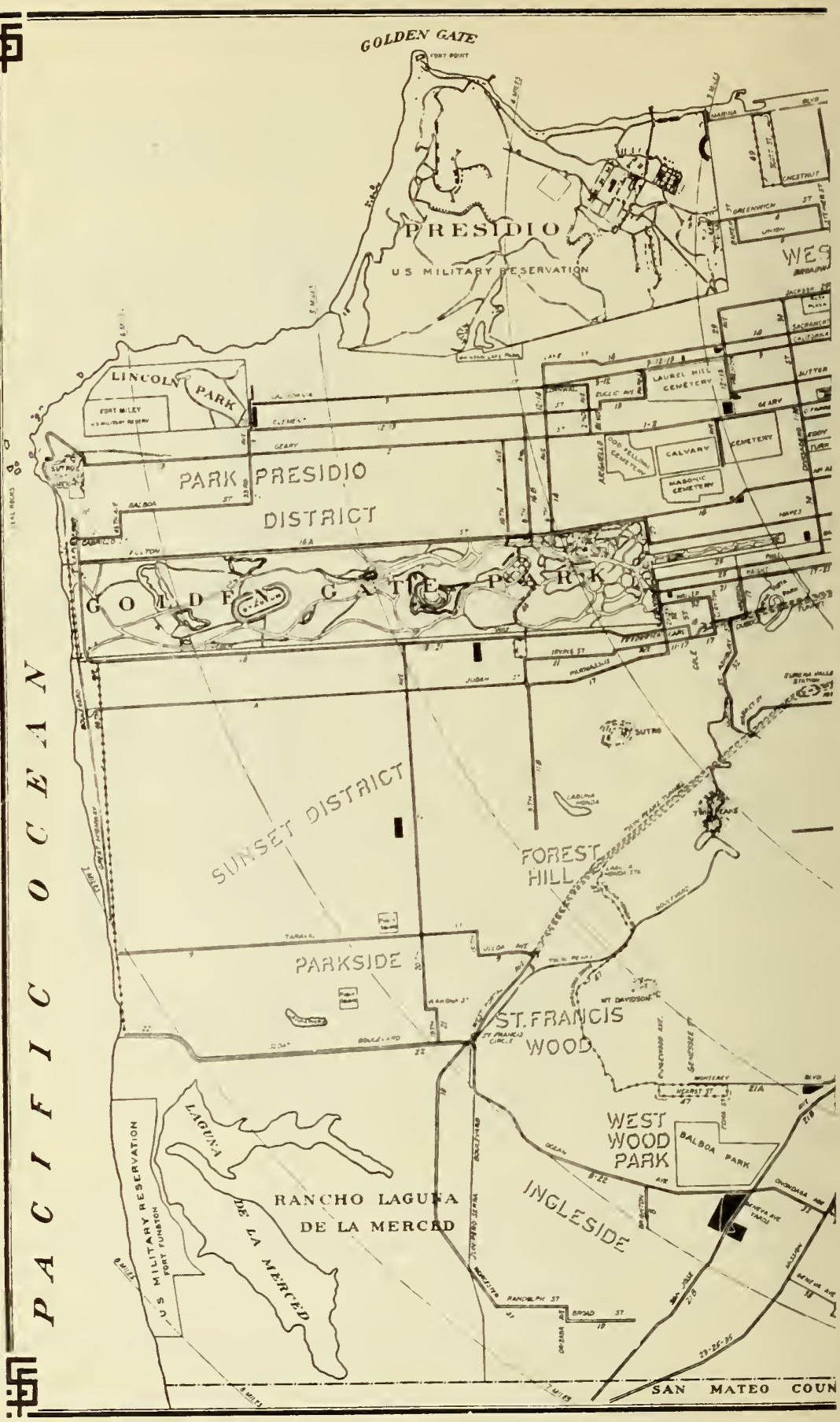
The Fillmore Street Line comes first in the number of transfer passengers carried, and is closely followed by the Kearny Street and Polk Street Lines. The Municipal "H" Line and also the Powell Street Cables carry a large number of transfer passengers.

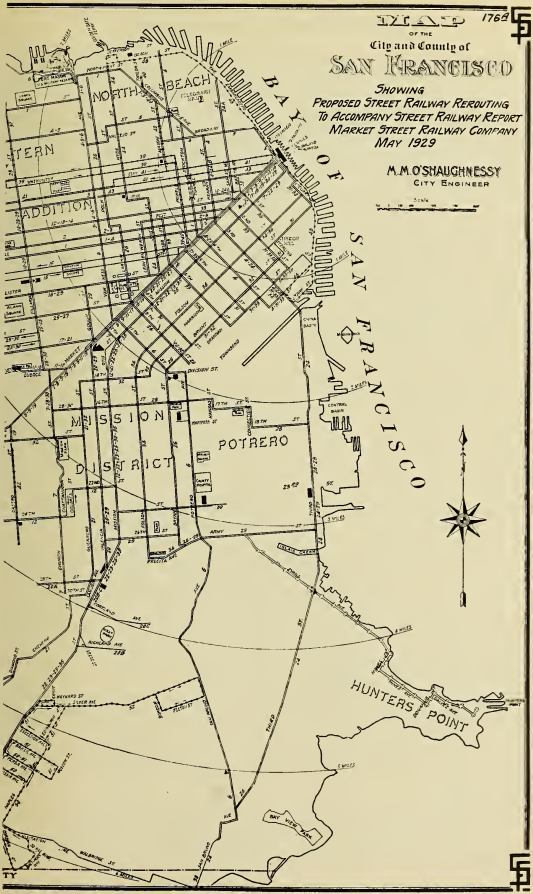
Table XXIII (page 67) gives the number of transfers handled by each line in the City.

Rearrangement of Routes

In working out the general rearrangement of routes all of the trackage of the three systems has been considered as being available for use in providing a city-wide transportation service of the utmost convenience to the public at the minimum expense of operation, due consideration being given to the various subjects listed at the beginning of the chapter.

Details are presented of forty-five electric and cable car routes and eight bus routes, utilizing the majority of the existing trackage, together with minor additions necessary to complete certain desirable routes, as well as new trackage


GOLDEN GATE
PRESIDIO
U S MILITARY RESERVATION
LINCOLN PARK
FORT MILEY
PARK PRESIDIO DISTRICT
GOLDEN GATE PARK
LAUREL HILL CEMETERY
CALVARY CEMETERY
MASONIC CEMETERY
SUNSET DISTRICT
FOREST HILL
PARKSIDE
ST. FRANCIS WOOD
WEST WOOD PARK
BALBOA PARK
INGLESIDE
RANCHO LAGUNA DE LA MERCED
LAGUNA DE LA MERCED
U S MILITARY RESERVATION FORT FUNSTON
PACIFIC OCEAN
SAN MATEO COUN



MAP
176a
OF THE
City and County of
SAN FRANCISCO
SHOWING
PROPOSED STREET RAILWAY REROUTING
TO ACCOMPANY STREET RAILWAY REPORT
MARKET STREET RAILWAY COMPANY
MAY 1929
M.M.O'SHAUGHNESSY
CITY ENGINEER
Scale
BAY OF SAN FRANCISCO
NORTH BEACH
TERN ADDITION
MISSION DISTRICT
POTRERO
HUNTERS POINT
BAY VIEW PARK
DIVISION ST.
MARKET
CHINA BASIN
CENTRAL BASIN
ISLAIS CREEK
1 MILE
2 MILES
3 MILES
4 MILES
5 MILES
6 MILES

in place of portions of the California Street Cable Railroad and some second track where single track now exists. Some new special work will be required in order to make all of this rerouting possible, likewise some special work will be eliminated by the proposed routing.

The routes described as being desirable for establishment under the unified operating plan present some of the possibilities offered through such a comprehensive readjustment of the City's service. Should the combination be effected, changes in these routes might advantageously be made from time to time as experience would dictate.

With sixty-eight trolley, cable and bus routes to be rearranged, it is evident that there are hundreds of possible combinations. The proposal to change any route will produce general discussion and bring forth many complaints from individuals as well as other suggestions. This is to be expected as everyone looks at the transportation problem from a different viewpoint, depending on his place of residence and on the location of his business. Any rearrangement of service is bound to discommode some passengers, and at the same time prove of great convenience to others.

By considering the traffic checks, the reroutings proposed have been arranged with a view to discommoding as few as possible and benefiting the greatest number. The final result will be of great advantage to the City as a whole.

No comprehensive rearrangement of routing has ever been undertaken without creating much adverse comment from those discommoded, while the patron whose service is bettered fails to record his sentiments The matter of service will be more fully discussed under the cost of operating the new routes, but it should be said at this point that in working up the rerouting, careful consideration has been given to service requirements, and in no case has the amount of service been decreased where traffic warranted its maintenance There have been some cases where the checks showed the service to be far in excess of the traffic. In some of these cases the headways have been lengthened with the view of economy without seriously impairing the service. In other cases the survey has shown the inadequacy of the service and in these cases the headways have been decreased with the view of bettering the service.

In reducing the number of car miles and car hours operated, the amount of service has on the whole been increased rather than decreased, the savings being made by cutting off mileage shown to be absolutely unnecessary.

With three separate systems supplying the service, there are of necessity competitive conditions causing each road to run a richer service on certain lines than the traffic warrants. The three separate organizations, being incapable of functioning as a unit, cannot put into effect the routing improving Market Street conditions. Neither can they put into effect some of the through routing which would be inaugurated under the proposed plans.

There is no doubt that the proposed routes would give most excellent service. It is impossible to put them into effect without the combination of the three systems and it is confidently predicted that the inauguration of the rerouting scheme, if allowed to operate for thirty or sixty days would meet with the hearty approval of the majority of the patrons. It would take at least this length of time for everyone using the cars to become familiar with the transportation possibilities of the proposed scheme.

Of necessity the route designations of the majority of the lines would have to be changed, which in itself would result in some confusion at first.

The above statements are not in any sense to be taken as an attempt to apologize for the proposed reroutings. They are made to prepare your Board

against hasty criticisms and to secure from those interested more careful consideration than might be given by a patron considering only his own personal convenience.

The proposed new routes are set forth and described in detail on the following pages. Due to the fact that a number of the lines have been combined it has been necessary to use a new designation—numbers being employed for this purpose. The proposed routes are numbered from one to fifty-three inclusive. These numbers are not intended to be the routing numbers to be assigned should the combination be effected but are used merely for the purposes of this report.

Insofar as possible, the present designations are also shown for the purpose of tying the proposed routes back to the existing service.

PROPOSED ROUTE NO. 1.

TENTH AVENUE—GEARY AND STOCKTON STREETS.

Municipal Line "A"—Geary Street and Park

To be combined with present line "F," route as follows: From Fulton Street via Tenth Avenue, Geary Street, Divisadero Street, O'Farrell Street, Stockton Street, Columbus Avenue, North Point Street, Van Ness Avenue and Chestnut Street to Scott Street, later to be extended into the Marina District replacing present bus service.

One Way Distance, Miles

Present A Line Ferry to Tenth and Fulton	4.80		
Present F Line Market to Scott	3.08	7.88	
Less Ferry to Geary and Stockton	.91		
Less Stockton, Market to O'Farrell	.08	.99	6.89
Plus Divisadero-Geary to O'Farrell			.07
			6.96

One Way Running Time, Minutes	Day	Night
Tenth Avenue—Fulton to Geary	2.5	2.5
Geary—Tenth to Second Avenue	3.0	2.5
Geary—Second to Presidio	3.5	3.5
Geary and Presidio to O'Farrell and Van Ness	7.5	7.5
O'Farrell and Van Ness to Stockton and O'Farrell	6.0	6.0
Stockton—O'Farrell to Columbus Avenue	6.5	6.0
Columbus to Van Ness and Chestnut	7.0	6.5
Chestnut—Van Ness to Scott	5.0	4.0
	41.0	38.0

PROPOSED SCHEDULE.

From	To	Hours	Head-way	Running Time	Cars	Car Hours	Round Trips
5:30 A. M.	6:10 A. M.	.67	10	90	9	6	4
6:10	7:15	1.08	6	90	15	16	11
7:15	8:40	1.42	3½	98	28	40	24
8:40	11:30	2.83	4	92	23	65	42
11:30	4:20 P. M.	4.83	4	92	23	111	73
4:20 P. M.	5:40	1.33	3	99	33	44	27
5:40	8:30	2.83	5	90	18	51	34
8:30	11:30	3.00	6	84	14	42	30
11:30 P. M.	1:00 A. M.	1.50	9	90	10	15	10
						390	255

Week Day Car Hours..... 390
255 x 13.82 = Week Day Car Miles.....3520

This combination of the present Municipal "A" and "F" routes has the following advantages: As was discussed under the California Street Cable Railroad

combination, marked economies are possible through the rerouting of one of the present Geary Street lines over Stockton Street in connection with the "F" line. In that report the "C" line was used as a possible example. Further consideration showed that the "A" line was the more logical route to operate with the "F" line, as the establishment of a through route with either the "B" line or the "C" line would deprive some patrons of a direct connection to the ferries. By using the "A" line as the connecting line, only those on Tenth Avenue, between Geary Street and Fulton, would be deprived of this service. These patrons can, however, readily secure this either by transferring or by walking to Geary Street or to Fulton Street. The advantages of a through operation are the cutting-off of needless service on lower Geary and Market Streets now given by the "A" line and the discontinuance of the annoyance of turning back the "F" line cars at Stockton and Ellis Streets. This service gives the patrons all the advantages of the downtown service which they now enjoy.

By the use of Divisadero Street from Geary to O'Farrell and of O'Farrell from Divisadero to Stockton, excess service is taken off at Geary Street which will permit of faster operation and at the same time eliminate the necessity of operating the No. 20 Route which now runs outbound on O'Farrell Street and inbound on Ellis Street. This releases Ellis Street from street car tracks, making this a good east and west automobile route from Market Street to Divisadero Street.

The present headways on the "A" line and on the "F" line are approximately the same so that the two lines balance.

PROPOSED ROUTE NO. 2.

GEARY STREET AND OCEAN.

Municipal Line "B"—Geary Street and Ocean.

No change in present route. From Ferry Loop via Market Street, Geary Street, Thirty-Third Avenue, Balboa Street, Forty-Fifth Avenue and Cabrillo Street to Great Highway.

One Way Distance (same as present)	7.06 Miles
Week Day Car Hours (same as present)	327
Week Day Car Miles (same as present)	3420
Maximum Number of Cars	27

PROPOSED ROUTE NO. 3.

GEARY AND CALIFORNIA STREETS.

Municipal Line "C"—Geary and California Streets.

From Ferry Loop via Market Street, Geary Street, Van Ness Avenue and California Street to Thirty-Third Avenue.

One Way Distance

Same as at present via Cornwall and California Streets ..... 5.91 Miles

One Way Running Time, Minutes	Day	Night
California—Thirty-third to Funston	5.5	5.5
California—Funston to Presidio	7.0	7.0
California and Presidio to Geary and Van Ness	8.5	8.5
Geary—Van Ness to Kearny	7.0	6.0
Geary and Kearny to Ferry	6.0	5.0
	34.0	32.0

PROPOSED SCHEDULE, (Continued)

From	To	Hours	Headway	Running Time	Cars	Car Hours	Round Trips
5:30 A. M.	6:10 A. M.	.67	8	72	9	6	5
6:10	7:15	1.08	6	72	12	13	11
7:15	8:40	1.42	3½	77	22	32	25
8:40	11:30	2.83	5	75	15	43	34

From	To	Hours	way Head-	Time Running	Cars	Hours Car	Trips Round
11:30	4:20 P. M.	4.83	5	75	15	73	58
4:20 P. M.	5:05	.75	2½	77½	31	23	18
5:05	5:40	.58	4	72	18	11	9
5:40	8:30	2.83	5½	71½	13	37	31
8:30	11:30	3.00	7½	67½	9	27	24
11:30	1:00 A. M.	1.50	9	72	8	12	10
1:00 A. M.	5:00	4.00	60	60	1	4	4
						281	229

Week Day Car Hours..... 281
Week Day Car Miles 229 x 11.82.....2710

The abandonment of cable service on California Street west of Van Ness Avenue is necessary in order to permit this new routing. The details of this proposed change were discussed at great length in the report on the California Street Cable Railroad and it is hardly necessary to make further comment here.

PROPOSED ROUTE NO. 4.

PRESIDIO-KEARNY STREET AND NORTH BEACH.

Municipal Line "D"—Geary Street and Van Ness Avenue.

To be connected with Route No. 15. From Presidio Loop via Private Right of Way, Greenwich Street, Steiner Street, Union Street, Van Ness Avenue, O'Farrell Street, Stockton Street, Fourth Street, Townsend Street, Third Street, Kearny Street, Broadway and Powell Street to Jefferson Street and Embarcadero.

One Way Distance, Miles

D—Presidio to Ferry.....		4.24	
Less Ferry to Van Ness and Geary			
Ferry to Kearny.....	.71		
Kearny to Van Ness.....1.00		1.71	2.53
15 Line—Third and Townsend to Powell and Jefferson.....			2.61
Third and Townsend to Fourth—Market and Ellis.....	.99		
Stockton and Ellis to O'Farrell and Stockton.....	.08		
O'Farrell—Stockton to Van Ness.....	.83		
Van Ness—O'Farrell to Geary.....	.07		1.97
..			7.11

One Way Running Time, Minutes	Day	Night
Presidio to Baker and Greenwich.....	2.0	2.0
Greenwich and Baker to Union and Steiner.....	3.0	3.0
Union and Steiner to Vallejo and Van Ness.....	4.5	4.5
Van Ness—Vallejo to Pine.....	3.5	3.5
Van Ness—Pine to O'Farrell.....	2.5	2.0
O'Farrell—Van Ness to Stockton.....	6.0	6.0
Stockton and O'Farrell to S. P. Station.....	8.0	6.5
S. P. Station to Third and Market.....	6.0	5.0
Third and Market to Kearny and Broadway.....	7.0	6.0
Kearny and Broadway to Powell and Jefferson.....	7.5	6.0
	50.0	44.5

PROPOSED SCHEDULE.

From	To	Hours	Head- way	Running Time	Cars	Car Hours	Round Trips
5:30 A. M.	6:10 A. M.	.67	10	100	10	7	4
6:10	7:15	1.08	8	104	13	15	9
7:15	8:40	1.42	4	108	27	39	22
8:40	11:30	2.83	5	110	22	63	34
11:30	4:20 P. M.	4.83	5	110	22	107	58
4:20 P. M.	5:40	1.33	3	111	37	13	7

PROPOSED SCHEDULE, (Continued)

From	To	Hours	Head-way	Running Time	Cars	Car Hours	Round Trips
			5	110	22	22	12
5:40	8:30	2.83	6	108	18	51	29
8:30	11:30	3.00	7	98	14	42	26
11:00	1:00 A. M.	1.50	15	105	7	11	6
							207
*1:00 A. M.	5:30	4.50	30	60	2	9	9
Week Day Car Hours							379
Week Day Car Miles 207 x 14.22							2950
9 x 8.52						77	3027

*Owl from North Beach to Twenty-third and Third Streets via Powell, Broadway, Kearny and Third Streets.

One Way Distance—4.26 Miles.

The present "D" line operates from the Presidio via Van Ness Avenue, Geary and Market Streets to the ferries. Direct service from the Presidio to the ferries is provided by the "E" line but no direct service is given from the Presidio or from Van Ness Avenue to the Third and Townsend Streets station. This is believed to be a desirable service and by connecting the line from the Presidio with the present Market Street Railway Company's No. 15 line it is possible to do away with the time required at the station on account of turning back both the line from the Presidio and the line from North Beach, thus avoiding excess cost and street congestion. Operating via O'Farrell Street to Stockton Street, thence over Fourth Street, takes care of the service previously given by the No. 20 line. On Van Ness Avenue it will cross a great many of the important lines, providing quicker service to the station. The headways on the "D" line and on the No. 15 line very closely balance.

PROPOSED ROUTE NO. 5.

UNION STREET.

Municipal Line "E"—Union Street.

From Ferry via Embarcadero, Broadway, Columbus Avenue, Union Street, Larkin Street, Vallejo Street, Van Ness Avenue, Union Street, Baker Street, Greenwich Street, and Private Right of Way to Presidio Loop.

One Way Distance, Miles

Present Route	3.77
Less Ferry to Stockton	1.01
	2.76
Plus Ferry to Broadway and Kearny	.74
Broadway—Kearny to Columbus	.07
Columbus—Broadway to Stockton	.17
(Present Route 3.77)	3.74

One Way Running Time, Minutes	Day	Night
Presidio to Baker and Greenwich	2.0	2.0
Greenwich and Baker to Steiner and Union	4.0	4.0
Steiner and Union-Vallejo and Van Ness	4.5	4.5
Vallejo and Van Ness to Kearny and Broadway	8.5	8.5
Kearny and Broadway to Ferry	6.0	5.0
	25.0	24.0

PROPOSED SCHEDULE.

From	To	Hours	Head-way	Running Time	Cars	Car Hours	Round Trips
5:30 A. M.	6:10 A. M.	.67	10	60	6	4	4
6:10	7:15	1.08	5	55	11	12	13
7:15	8:40	1.42	4½	58½	13	19	19
8:40	11:30	2.83	6½	58½	9	26	26
11:30	4:20 P. M.	4.83	6	60	10	49	49
4:20 P. M.	5:40	1.33	4½	58½	13	18	18
5:40	8:30	2.83	5½	55	10	29	31
8:30	11:30	3.00	7	56	8	24	26
11:30	1:00 A. M.	1.50	8	56	7	11	12
1:00 A. M.	5:00	4.00	60	60	1	4	4
						196	202

Week Day Car Hours.....196
Week Day Car Miles 202 x 7.48.....1510

The changes in this line have already been discussed under the abandonment of the tracks through the commission district on Washington and Jackson Streets. The length of route is approximately the same, but it should be possible to improve the running time during the hours when the business in the commission district is heavy.

Municipal Line "F"—Stockton Street.

To be combined with Line "A" under the proposed Route No. 1.

PROPOSED ROUTE NO. 6.

VAN NESS-POTRERO AND SAN BRUNO AVENUES.

Municipal Line "H"—Potrero and Van Ness Avenues.

To operate over Line No. 25 route beyond Army Street. Route from Fort Mason Loop via Private Right of Way, Van Ness Avenue, Eleventh Street, Division Street, Potrero Avenue, and San Bruno Avenue to Third Street and Wilde Avenue. During A. M. and P. M. rush hours cars to be operated through from Third Street and Wilde Avenue via San Bruno Avenue to County Line at Sunny Dale Avenue (Visitacion Valley).

One Way Distance, Miles

Present Route H—Ft. Mason to Army		4.66
Present Route 25		5.35
		10.01
Less—Fifth and Market to Bryant	.60	
Bryant, Fifth to Twenty-sixth	2.19	
Twenty-sixth and Bryant to Army and San Bruno	.28	3.07
		6.94

One Way Running Time, Minutes	Day	Night
Laguna Street Loop to Bay and Van Ness	3.0	2.5
Van Ness—Bay to Vallejo	2.5	2.5
Van Ness—Vallejo to Pine	3.5	3.5
Van Ness—Pine to Geary	2.0	1.5
Van Ness—Geary to Eleventh and Market	5.0	4.5
Eleventh and Market to Potrero and Mariposa	7.0	6.0
Potrero—Mariposa to Army	4.5	4.5
Army and Potrero to Third and Wilde	12.0	11.0
	39.5	36.0
Third and Wilde to Visitacion Valley	3.5	3.5
	43.0	39.5

PROPOSED SCHEDULE *
Complete Route

From	To	Hours	Head-way	Running Time	Cars	Car Hours	Round Trips
5:30 A. M.	6:10 A. M.	.67	8	80	10	7	5
6:10	7:15	1.08	8	80	10	11	9
7:15	8:40	1.42	5	85	17	25	17*
8:40	11:30	2.83	10	90	9	26	17
11:30	4:20 P. M.	4.83	10	90	9	44	29†
4:20 P. M.	5:40	1.33	5	90	18	24	16†
5:40	8:30	2.83	10	80	8	23	17
8:30	11:30	3.00	10	80	8	24	18
11:30	1:00 A. M.	1.50	15	90	6	9	6
1:00 A. M.	5:30	4.50	60	120	2	7	5
						200	139
35 Round Trips to Visitacion Valley at 10 minutes						6	
						206	

*12 Round Trips to Visitacion.
†23 Round Trips to Visitacion.

Turnback at Army Street

From	To	Hours	Head-way	Running Time	Cars	Car Hours	Round Trips
5:30 A. M.	6:10 A. M.	.67	8	56	7	5	5
6:10	7:15	1.08	8	56	7	8	9
7:15	8:40	1.42	5	65	13	19	17
8:40	11:30	2.83	10	60	6	17	17
11:30	4:20 P. M.	4.83	10	60	6	29	29
4:20 P. M.	5:40	1.33	5	65	13	18	16
5.40	8:30	2.83	10	60	6	17	17
8:30	11:30	3.00	10	60	6	18	18
11:30	1:00 A. M.	1.50	15	60	4	6	6
1:00 A. M.	5:30	4.50	60	60	1	5	5
						142	139
Week Day Car Hours						348	
Week Day Car Miles		139 x 13.88				1930	
		139 x 9.32				1300	
		35 x 1.48				52	
						3282	

This is a logical extension of the Potrero Avenue route and will give the people on San Bruno Avenue direct connection with Market Street and Van Ness Avenue, a privilege which they have not heretofore enjoyed. The present Potrero Avenue service is considerably heavier than that of the No. 25 line of the Market Street Railway which will be replaced. Therefore, it is intended to run only half of the present Potrero Avenue service beyond Army Street. This will give considerably better service than San Bruno Avenue now has. The improved running time will make the service as a whole more valuable.

PROPOSED ROUTE NO. 7.
CHURCH AND MISSION STREETS.
Municipal Line "J"—Church Street.

From Ferry via Embarcadero, Mission Street, Otis Street, Twelfth Street, Market Street and Church Street to Thirtieth Street.

One Way Distance, Miles		
(Present Church Street—4.56)		
Thirtieth Street to Market and Church	1.80	
Market—Church to Twelfth	.71	
Twelfth Street—Market to Otis	.12	
Mission—Ferry to Otis and Twelfth	2.10	4.73

One Way Running Time, Minutes	Day	Night
Church—Thirtieth to Twenty-third	4.5	4.5
Church—Twenty-third to Market	5.5	5.5
Market—Church to Twelfth	3.5	3.5
Market and Twelfth to Fifth and Mission	7.0	6.5
Mission—Fifth to Ferry	8.0	6.0
	28.5	26.0

PROPOSED SCHEDULE.

From	To	Hours	Headway	Running Time	Cars	Car Hours	Round Trips
5:30 A. M.	6:10 A. M.	.67	7	63	9	6	6
6:10	7:15	1.08	4	60	15	17	17
7:15	8:40	1.42	3½	66½	19	27	25
8:40	11:30	2.83	5	65	13	37	34
11:30	4:20 P. M.	4.83	5	65	13	63	58
4:20 P. M.	5:40	1.33	4	68	17	23	20
5:40	8:30	2.83	5½	60½	11	32	31
8:30	11:30	3.00	5½	60½	11	33	33
11:30	1:00 A. M.	1.50	10	60	6	9	9
1:00 A. M.	5:30	4.50	30	60	2	9	9
						.256	242

Week Day Car Hours..... 256
Week Day Car Miles 242 x 9.46.....2290

This route is the same as the present except that from Twelfth Street to the Ferry the operation will be via Mission Street rather than via Market Street. The reason for making this change is to take excess service from Market Street. This also provides a means for reaching Mission Street by a single transfer from all of the other lines operating on Market Street west of Twelfth.

PROPOSED ROUTE NO. 8.

MARKET STREET AND INGLESIDE.

Municipal "K" Line—Market Street and Ingleside.

No change in present operation. From Ferry Loop via Market, Twin Peaks Tunnel, West Portal Avenue, Junipero Serra Boulevard, Ocean Avenue, and Brighton Avenue to Grafton Avenue.

One Way Distance (same as present), Miles..... 7.67
Week Day Car Hour (same as present)..... 282
Week Day Car Miles (same as present).....3142
Maximum Number of Cars..... 23

PROPOSED ROUTE NO. 9.

MARKET AND TARAVAL STREETS.

Municipal Line "L"—Market and Taraval Streets.

No change in present operation. From Ferry Loop via Market Street, Twin Peaks Tunnel, West Portal Avenue, Ulloa Street, Fifteenth Avenue, and Taraval Street to Forty-eighth Avenue. Fifty per cent of service to be turned back on Taraval Street at about Thirty-fourth or Thirty-fifth Avenue.

One Way Distance (same as present), Miles..... 7.84
Week Day Car Hours (same as present)..... 252
Week Day Car Miles (same as present).....2830
Maximum Number of Cars..... 21

PROPOSED ROUTE NO. 10.

OCEAN VIEW.

Municipal Line "M"—Ocean View.

No change in present operation. From St. Francis Circle (Sloat Boulevard and West Portal Avenue) via Private Right of Way, Worcester Avenue, Randolph Street, Orizaba Avenue, and Broad Street to Plymouth Avenue.

One Way Distance (same as present), miles	2.42
Week Day Car Hours (same as present)	26
Week Day Car Miles (same as present)	317
Maximum Number of Cars	2

PROPOSED ROUTE NO. 11.

(a) JUDAH STREET AND BEACH (b) DUBOCE AND NINTH AVENUES

Municipal Line "N"—Judah Street.

From Ferry Loop via Market Street, Duboce Avenue, Sunset Tunnel, Carl Street, Arguello Boulevard, Irving Street, Ninth Avenue, and Judah Street, one-half of the service continuing via Judah Street to the Great Highway, the other half operating via Ninth Avenue to Pacheco Street.

	One Way Distance, Miles	
11(a)	Judah Street and Beach—Present Route N	7.33
11(b)	Duboce and Ninth Avenues	
	Ninth Avenue, Pacheco to Judah	.78
	Ferry to Ninth Avenue and Judah	4.92
	Ferry to Ninth and Pacheco	5.70

	One Way Running Time, Minutes	**Day**	**Night**
11(a)	Judah Street and Beach		
	Market—Ferry to Kearny	6.0	5.0
	Market—Kearny to Sixth	4.0	3.0
	Market—Sixth to Eleventh	5.0	4.0
	Market—Eleventh to Duboce	3.5	3.5
	Market and Duboce to West Portal	5.0	5.0
	West Portal to Ninth Avenue and Judah	6.5	6.5
		30.0	27.0
	Judah—Ninth Avenue to Twenty-seventh Avenue	5.5	5.5
	Judah—Twenty-seventh Avenue to Beach	6.5	6.5
		42.0	39.0
11(b)	Duboce and Ninth Avenues		
	Ferry to Ninth Avenue and Judah	30.0	27.0
	Ninth Avenue—Irving to Pacheco	5.0	5.0
		35.0	32.0

PROPOSED SCHEDULES.

11(a) Judah Street and Beach.

From	To	Hours	Head-way	Running Time	Cars	Car Hours	Round Trips
5:30 A. M.	6:10 A. M.	.67	15	90	6	4	3
6:10	7:15	1.08	10	80	8	9	7
7:15	8:40	1.42	6	90	15	22	14
8:40	11:30	2.83	10	90	9	26	17
11:30	4:20 P. M.	4.83	10	90	9	44	29
4:20 P. M.	5:40	1.33	6	90	16	22	14
5:40	8:30	2.83	10	90	9	26	17
8:30	11:30	3.00	12	84	7	21	15
11:30	1:00 A. M.	1.50	15	90	6	9	6
						183	122

Week Day Car Hours	183
Week Day Car Miles 122 × 14.66	1790

PROPOSED SCHEDULE, (Continued)

11(b) Duboce and Ninth Avenues.

From	To	Hours	Head-way	Running Time	Cars	Car Hours	Round Trips
5:30 A. M.	6:10 A. M.	.67	15	75	5	4)	
6:10	7:15	1.08	10	70	7	8)	
7:15	8:40	1.42	6	78	13	19)	
8:40	11:30	2.83	10	80	8	23)	
11:30	4:20 P. M.	4.83	10	80	8	39)	122
4:20 P. M.	5:40	1.33	6	84	14	19)	
5:40	8:30	2.83	10	80	8	23)	
8:30	11:30	3.00	12	72	6	18)	
11:30	1:00 A. M.	1.50	15	75	5	8)	
1:00 A. M.	5:00	4.00	60	60	1	4)	4
						165	126

Week Day Car Hours..... 165
Week Day Car Miles 126 × 11.40.....1440

Line "11-a" will operate as does the present Municipal "N" Line.

Line "11-b" will take the place of the present Market Street Railway Line No. 6 on Ninth Avenue from Judah Street to Pacheco Street, and will give the people on Ninth Avenue who participated in the cost of the Sunset Tunnel, direct service through the tunnel without transfer.

PROPOSED ROUTE NO. 12.

SUTTER-MISSION AND TWENTY-FOURTH STREETS.

Market Street Line No. 1—Sutter and California Streets.

To be combined with Route No. 11. From Thirty-third Avenue via Clement Street, Sixth Avenue, California Street, Presidio Avenue, Sutter Street, Market Street, First Street, Mission Street, Twenty-second Street, Chattanooga Street, and Twenty-fourth Street to Hoffman Avenue. Return from Hoffman Avenue via Twenty-fourth Street, Dolores Street, Twenty-second Street, and reverse of above route to Thirty-third Avenue and Clement Street.

One Way Distance, Miles

Sutter-California, Present Route		.6.01
Less Ferry to First		.43
		5.58
No. 11 Ferry to Twenty-fourth and Hoffman	.4.79	
Less Ferry to First and Mission	.50	4.29
Plus First Street, Market to Mission		.11
		9.98

One Way Running Time, Minutes	Day	Night
Thirty-third and Clement to Sixth Avenue and Clement	8.5	7.5
Sixth Avenue and Clement to Presidio and California	6.0	5.0
Presidio and California to Sutter and Fillmore	5.0	5.0
Sutter Street, Fillmore to First and Market	13.0	11.5
First and Market to Fifth and Mission	6.0	4.0
Mission Street, Fifth to Sixteenth	8.5	7.5
Sixteenth to Twenty-second	3.5	3.5
Twenty-second to Twenty-fourth and Hoffman	10.0	9.0
	60.5	53.0

PROPOSED SCHEDULE.

From	To	Hours	Head-way	Running Time	Cars	Car Hours	Round Trips
5:30 A. M.	6:10 A. M.	.67	15	120	8	6	3
6:10	7:15	1.08	6	114	19	21	11
7:15	8:40	1.42	4	132	33	47	22
8:40	11:30	2.83	5	130	26	74	34
11:30	4:20 P. M.	4.83	5	130	26	126	58
4:20 P. M.	5:40	1.33	3	132	44	59	27
5:40	8:30	2.83	6	114	19	54	29
8:30	11:30	3.00	7½	112½	15	45	21
11:30	1:00 A. M.	1.50	12	108	9	14	8
1:00 A. M.	5:00	4.00	60	120	2	8	4
						454	220

Week Day Car Hours..... 454
Week Day Car Miles 220 × 19.96.....4400

This line has been routed through from Market Street to Mission via First, thence taking the place of the No. 11 line for the purpose of reducing the number of cars using the loops at the Ferry and avoiding the loss of time incident to lay-over at the Ferry for both the No. 1 and the No. 11 lines. The checks of the routes as at present operated show that less than five per cent of the through passengers use the service east of First Street. This small percentage will not be deprived of ferry service as they may board other cars on either Sutter Street or Mission Street. The services operated on the two routes very closely balance except during the early evening rush hours when the headway on Sutter Street will be decreased from three and a half minutes to three minutes, thus giving a more frequent service on Sutter Street.

PROPOSED ROUTE NO. 13.

SUTTER AND CLEMENT STREET.

Market Street Line No. 2—Sutter and Clement Streets.

No change in present operation. From Ferry Loop via Market Street, Sutter Street, Presidio Avenue, California Street, Parker Avenue, Euclid Avenue, Arguello Boulevard, Clement Street, Thirty-third Avenue, Geary Street, Forty-eighth Avenue, and Private Right of Way to Sutro Baths.

One Way Distance (same as present)..... 7.39 Miles
Week Day Car Hours (same as present)..... 323
Week Day Car Miles (same as present).....3102
Maximum Number of Cars..... 28

This line has been retained between its present terminals for the purpose of giving a direct route to the Ferry from Clement Street and Sutter Street. By retaining this route the changes in the present No. 1 and No. 3 routes will in no way interfere with direct ferry service.

PROPOSED ROUTE NO. 14.

SUTTER-SACRAMENTO STREETS AND SIXTH AVENUE.

Market Street Line No. 3—Sutter and Jackson Streets.

From Fulton Street via Sixth Avenue, Lake Street, Arguello Boulevard, Sacramento Street, Fillmore Street, Sutter Street, Kearny Street, Bush Street, Sansome Street and Sutter Street to Kearny Street, then reverse of above route to Sixth Avenue and Fulton Street.

One Way Distance, Miles

Sixth Avenue and Fulton to Sacramento and Divisadero	2.24	
Sacramento and Divisadero to Sutter and Fillmore	.64	
Sutter and Fillmore to Kearny and Sutter	1.65	
Kearny and Sutter to Bush and Sansome (½ Loop)	.25	4.73
Present No. 3 Route	3.78	
Present No. 4 Route	5.82	

One Way Running Time, Minutes	**Day**	**Night**
Sixth Avenue and Fulton to Clement	3.0	3.0
Sixth Avenue and Clement to Sacramento and Divisadero	8.0	7.5
Sacramento and Divisadero to Sutter and Fillmore	5.0	4.5
Sutter Street—Fillmore to Kearny	11.0	10.0
Kearny and Sutter to Bush and Sansome	2.5	2.0
	29.5	27.0

PROPOSED SCHEDULE.

From	To	Hours	Head-way	Running Time	Cars	Car Hours	Round Trips
5:30 A. M.	6:10 A. M.	.67	10	60	6	4	4
6:10	7:15	1.08	8	64	8	9	8
7:15	8:40	1.42	3½	70	20	29	25
8:40	11:30	2.83	5½	66	12	34	31
11:30	4:20 P. M.	4.83	4	68	17	82	73
4:20 P. M.	5:40	1.33	3½	70	20	27	23
5:40	8:30	2.83	7	63	9	26	25
8:30	11:30	3.00	9	63	7	21	20
11:30	1:00 A. M.	1.50	15	60	4	6	6
							215
*1:00 A. M.	5:00	4.00	30	60	2	8	*8
						246	

*Owl via present No. 4 routing

One Way Distance—5.82			
Week Day Car Hours		246	
Week Day Car Miles	215 × 9.56	2060	
	8 × 11.64	93	2153

The present No. 3 Route, which terminates at Presidio Avenue and California Street, does not serve as efficiently as it might. Traffic checks show that only 35% of the total passengers of this line use the route north and west of Sacramento and Fillmore Streets. Ten per cent of the total are passengers who use the route locally between Sutter and Fillmore and the western terminal who can as conveniently use the other service which is being provided by Proposed Route No. 29.

Operating west on Sacramento Street from Fillmore Street into the Richmond District will give a more direct route than that provided by the present No. 4 line from Golden Gate Park and the Richmond District to the downtown area. A more direct connection is also made between the Richmond District and the north end of Fillmore Street, eliminating one transfer. Looping downtown via Kearny, Bush and Sansome Streets takes a route off lower Market Street without great inconvenience, as the traffic checks show that the Proposed No. 13 route, which reaches the same district, has ample capacity to carry all the passengers who go east of Sansome Street. The loadings on the two lines show that approximately five per cent of the through passengers on the present No. 1 line go east of Sansome Street, and about the same percentage of those on the present No. 3 line.

PROPOSED ROUTE NO. 15.

TURK AND EDDY STREETS.

Market Street Line No. 4—Turk and Eddy Streets.

From Powell and Market Streets via Eddy Street and Divisadero to Turk Street, returning from Divisadero Street via Turk Street, Mason Street, and Eddy Street to Powell and Market Streets.

One Way Distance, Miles

Eddy-Powell to Divisadero	1.70	
Turk-Powell to Divisadero and Eddy	1.83	
	3.53	
Plus Cross-over to Powell	.06	
Round Trip	3.59	
One Way Distance		1.80
(Present Route, 5.82.)		

One Way Running Time, Minutes	**Day**	**Night**
Powell and Eddy to Fillmore and Eddy	8.0	7.0
To Turk and Divisadero	3.0	3.0
	11.0	10.0

PROPOSED SCHEDULE.

From	To	Hours	Head-way	Running Time	Cars	Car Hours	Round Trips
5:30 A. M.	6:10 A. M.	.67	12	24	2	1	4
6:10	7:15	1.08	8	24	3	3	8
7:15	8:40	1.42	5	30	6	9	17
8:40	11:30	2.83	5	30	6	17	34
11:30	4:20 P. M.	4.83	5	30	6	29	58
4:20 P. M.	5:40	1.33	4	32	8	11	20
5:40	8:30	2.83	6	24	4	12	29
8:30	11:30	3.00	6	24	4	12	30
11:30	1:00 A. M.	1.50	10	24	2	3	8
						97	208

Week Day Car Hours 97

Week Day Car Miles 208 × 3.60 750

Note: Owl Service every 30 minutes to be provided by Route No. 14 from 1:00 A. M. to 5:00 A. M.

It is contemplated that the future operation of this route will be from Turk and Market Streets over double track to Arguello Boulevard, thence over Balboa Street to the Ocean Beach as was proposed in the bond issues submitted in 1927. At the time the line on Turk Street is double tracked the present single tracks on Mason Street between Eddy and Turk Streets and all of the trackage on Eddy Street from Powell Street to Divisadero Street will be abandoned. This will give a through route from Market Street to Divisadero over Eddy Street for automobile traffic without interference from street car operation.

It is felt that very little inconvenience will be experienced through cutting off the operation of this line on Market Street. At the present time during the rush hours the line is turned back at Powell Street, and the schedule submitted contemplates this turn-back at all hours of the day. When the line operates through to the beach it will no doubt be necessary to extend the service through to the Ferry.

The traffic checks of the present service indicate that less than twenty-five per cent of the passengers cross Powell Street east bound. A relatively small portion of the passengers using this line ride north and west of Turk and Divisadero Streets. There are, however, a considerable number of patrons who board the car on Sixth and Eighth Avenues in the Richmond District and later transfer to either the Sutter Street lines or to the Geary Street line, with which lines transfers are interchanged at Sutter and Divisadero, and at Geary Street and Divisadero. These passengers are very well cared for by the establishment of new route No. 14, which operates directly down Sutter Street and covers Sixth Avenue in the Richmond District. This rerouting will give ample service for all of the present patrons along Turk and Eddy Streets.

PROPOSED ROUTE NO. 16.

(a) McALLISTER AND FULTON STREETS.

(b) McALLISTER STREET AND EIGHTH AVENUE.

Market Street Line No. 5—McAllister and Fulton Street.

No change in present route. From Ferry Loop via Market Street, McAllister Street, Private Right of Way, Fulton Street and La Playa to Balboa Street Loop. One-half of main line service to operate to this terminal. One-half of main line service between Ferry Loop and Eighth Avenue and Fulton Street to be routed via Eighth Avenue from Fulton Street to Clement Street.

	One Way Distance, Miles		
16(a)	McAllister and Fulton Streets:		
	Ferry to La Playa Loop	7.08	
	(Ferry to Twenty-fifth Avenue	5.46)	
16(b)	McAllister Street and Eighth Avenue:		
	Ferry to Eighth and Fulton	4.43	
	Eighth Avenue, Fulton to Clement	.65	5.08

	One Way Running Time, Minutes	Day	Night
16(a)	McAllister and Fulton Streets:		
	Ferry to Powell and Market	8.0	6.0
	Market and Powell to Jones and McAllister	2.0	2.0
	McAllister and Jones to Van Ness	3.0	2.5
	Van Ness to Fillmore	4.0	3.5
	Fillmore to Divisadero	2.5	2.5
	Divisadero to Car House	2.5	2.5
	Fulton, Car House to Eighth	6.0	5.5
		28.0	24.5
	Eighth to Twenty-fifth Avenue	5.0	4.5
	Twenty-fifth Avenue to La Playa Loop-Balboa	7.0	6.0
		40.0	35.0
	(Note: Allow 50 minutes P. M. rush.)		
16(b)	McAllister Street and Eighth Avenue:		
	Ferry to Eighth Avenue and Fulton (above)	28.0	24.5
	Eighth Avenue, Fulton to Clement	3.5	2.5
		31.5	27.0
	(Note: Allow 34 minutes P. M. rush)		

PROPOSED SCHEDULE
McAllister and Fulton Streets

From	To	Hours	Headway	Running Time	Cars	Car Hours	Round Trips
5:30 A. M.	6:10 A. M.	.67	12	72	6	4	4
6:10	7:15	1.08	10	80	8	9	7
7:15	8:40	1.42	4	88	22	32	22
8:40	11:30	2.83	6	90	15	43	29
11:30	4:20 P. M.	4.83	5	90	18	87	58
4:20 P. M.	5:40	1.33	4	108	27	36	20
5:40	8:30	2.83	6	90	15	43	29
8:30	11:30	3.00	9	81	9	27	20
11:30	1:00 A. M.	1.50	15	75	5	8	6
1:00 A. M.	2:30	1.50	30	90	3	5	3
2:30	5:00	2.50	60	60	1	3	3
						297	201

Week Day Car Hours..... 297
Week Day Car Miles 201 × 14.16.....2850

McAllister and Eighth Avenue

From	To	Hours	Headway	Running Time	Cars	Car Hours	Round Trips
5:30 A. M.	6:10 A. M.	.67	12*	12	1	1	4
6:10	7:15	1.08	10	60	6	7	7
7:15	8:40	1.42	4	72	18	26	21
8:40	11:30	2.83	6	72	12	35	29
11:30	4:20 P. M.	4.83	5	75	15	73	58
4:20 P. M.	5:40	1.33	4	84	21	28	20
5:40	8:30	2.83	6	72	12	34	29
8:30	11:30	3.00	9	63	7	21	20
11:30	1:00 A. M.	1.50	15	60	4	6	6
1:00 A. M.	2:30	1.50	30	60	2	3	3
						234	193

*Shuttle on Eighth Ave. from Fulton St. to Clement Street (One Way Distance, .65.)
Week Day Car Hours..... 234
Week Day Car Miles 193 × 10.16.....1960
4 × 1.30..... 6 1966

The McAllister Street line is at present the heaviest line of the Market Street system, carrying close to 49,000 passengers per day. Part of this service is now turned back at Twenty-fifth Avenue and Fulton Street.

The traffic checks show that less than twelve per cent of the passengers on the No. 5 line are handled beyond Twenty-sixth Avenue. They also show that approximately only twenty-six per cent of the business of this line is done west of Eighth Avenue. By turning half of the service over Eighth Avenue to Clement Street it will be possible to give a most excellent downtown service from the business district adjacent to Eighth Avenue and Clement Street. Through the use of the transfer privilege Clement Street and Geary Street passengers, originating west of Eighth Avenue, can use a Fulton and McAllister Street car to destinations adjacent to these streets. This will make it possible for the Richmond District patrons to come into Market Street at McAllister Street rather than at Geary and Sutter, giving them direct service to the retail stores and the large motion picture theatres on upper Market Street. This is a service which should be of considerable benefit.

The proposed service to be provided over Fulton Street between Eighth Avenue and the Beach will be more than ample to care for all of the business.

PROPOSED ROUTE NO. 17.

HAIGHT STREET AND MASONIC AVENUE.

Market Street Line No. 6—Haight Street and Masonic Avenue.

From Ferry Loop via Market Street, Haight Street, Masonic Avenue, Frederick Street, Clayton Street, Carl Street, Stanyan Street, Parnassus Avenue, and Judah Street to Ninth Avenue.

One Way Distance, Miles

Ninth Avenue and Judah to Ferry.....5.03
(Present No. 6 Route, 5.81)

One Way Running Time, Minutes	Day	Night
Ferry—Powell and Market	8.0	6.0
Market and Powell to Jones	2.0	2.0
Jones to Larkin	2.0	2.0
Larkin to Haight and Gough	3.0	2.0
Haight and Gough to Masonic	8.0	7.0
Haight and Masonic to Ninth and Judah	11.0	10.0
	34.0	29.0

PROPOSED SCHEDULE.

From	To	Hours	Headway	Running Time	Cars	Car Hours	Round Trips
5:30 A. M.	6:10 A. M.	.67	12	72	6	4	4
6:10	7:15	1.08	9	72	8	9	8
7:15	8:40	1.42	5	80	16	23	17
8:40	11:30	2.83	6	78	13	37	29
11:30	4:20 P. M.	4.83	6	78	13	63	49
4:20 P. M.	5:40	1.33	4	80	20	27	20
5:40	8:30	2.83	7½	67½	9	26	23
8:30	11:30	3.00	7½	67½	9	27	24
						216	174

Note: 11:30 P. M. to 1:00 A. M.—15 minute service provided by route No. 21a.

Week Day Car Hours..... 216
Week Day Car Miles 174 × 10.06.....1750

This proposed route stops at Ninth Avenue and Judah Street. The present service on Ninth Avenue from Pacheco Street will be routed via Ninth Avenue, Irving Street, and the Sunset Tunnel as listed above under Route No. 11-b. The remainder of the route is the same as at present operated.

Traffic checks show that a considerable portion of the business originates along Frederick Street and at the Affiliated Colleges. The removal of the No. 7 line from Haight Street, as indicated under Proposed Route No. 18, necessitates the maintenance of this service on Haight Street. Those using the cars to Ninth Avenue, which amount to approximately twelve and one-half per cent of the passengers using the line, will be better served by the No. 11-b line. Those using this line to points between Haight and Masonic and Ninth Avenue and Judah Street amount to almost forty-seven per cent of the total number now using the line. This rearrangement will give those patrons adjacent to Ninth Avenue who participated in the cost of the Sunset Tunnel the advantages afforded by it.

The service rendered from Ninth Avenue eastward will be the same as that now given. Patrons coming in over Judah Street from the Beach may, by transfer, reach the Affiliated Colleges or points on Frederick Street or Masonic Avenue. Transfer connections with this line will also be made at Carl and Cole Street with the proposed No. 18 Route running along Lincoln Way to the Beach.

PROPOSED ROUTE NO. 18.

LINCOLN WAY AND OCEAN.

Market Street Line No. 7—Haight Street and Ocean.

From Ferry Loop via Market Street, Duboce Avenue, Sunset Tunnel, Carl Street, Cole Street, Frederick Street, Lincoln Way, Private Right of Way, and La Playa, to Balboa Street Loop.

One Way Distance, Miles

La Playa Loop to Frederick and Stanyan	3.82
Market Street, Ferry to Haight	2.16
Market, Haight to Duboce	.35
Duboce Tunnel to Cole and Carl	1.29
Cole, Carl to Frederick	.06
Frederick, Cole to Stanyan	.15
	7.83

(Present No. 7 Route, 7.96 Miles.)

One Way Running Time, Minutes	Day	Night
Balboa and La Playa to Twentieth and Lincoln	10.5	9.5
Twentieth and Lincoln to West Portal	9.0	9.0
West Portal to Duboce and Market	5.0	5.0
Market, Duboce to Eleventh	3.5	3.5
Market, Eleventh to Sixth	5.0	4.0
Market, Sixth to Kearny	4.0	3.0
Market, Kearny to Ferry	6.0	5.0
	43.0	39.0

From	To	Hours	Headway	Running Time	Cars	Car Hours	Round Trips
5:30 A. M.	6:10 A. M.	.67	12	84	7	5	4
6:10	7:15	1.08	8	88	11	12	8
7:15	8:40	1.42	5	95	19	27	17
8:40	11:30	2.83	7	91	13	37	25
11:30	4:20 P. M.	4.83	7	91	13	63	42
4:20 P. M.	5:40	1.33	4	96	24	32	20
5:40	8:30	2.83	7	91	13	37	25
8:30	11:30	3.00	9½	85½	9	27	19
11:30	1:00 A. M.	1.50	15	90	6	9	6
							166
*1:00 A. M.	5:00	4.00	60	60	1	4	4
						253	

*Owl to Market and Gough via Haight, one way distance..... 5.80 Miles

Week Day Car Hours		253
Week Day Car Miles	166 × 15.66 = 2600	
	4 × 11.60 = 47	2647

Through the construction of the track on Frederick Street and Carl Street, as already described, it will be possible to route the line running along Lincoln Way into the West Portal of the Sunset Tunnel thence to Market Street.

Approximately fifty per cent of the business on this line originates west of Stanyan Street. A considerable number of its passengers transfer at Fillmore Street, all of whom will be better served by passing through the Sunset Tunnel.

There is also a considerable amount of business handled to and from the State Teachers' College at Buchanan Street which will be as readily handled from Market and Buchanan Streets.

This also will give the people of the Sunset District, who contributed to the construction of the Tunnel, the advantages to be gained therefrom through decreasing the running time. The business on Haight Street will be handled by Proposed Routes Nos. 17, 21-a and 21-b.

PROPOSED ROUTE NO. 19.

MARKET STREET.

Market Street Line No. 8—Market Street.

No change in present operation. From Ferry Loop via Market Street and Castro Street to Eighteenth Street. During A. M. and P. M. rush hours a portion of the cars on this route will operate from Eighteenth and Castro Streets via Eighteenth Street and Market Street to Caselli Avenue (switch back).

One Way Distance (same as present)	3.31 Mi. 18th and Castro Sts. 4.10 Mi. Caselli Avi.
Week Day Car Hours (same as present)	270
Week Day Car Miles (same as present)	2215
Maximum Number of Cars	23

PROPOSED ROUTE NO. 20.

(a) VALENCIA AND TWENTY-NINTH STREETS.
(b) VALENCIA STREET AND RICHLAND AVENUE.
(c) VALENCIA STREET AND CORTLAND AVENUE.

Market Street Line No. 9—Valencia Street
Market Street Line No. 23—Richland Avenue.
Market Street Line No. 24—Cortland Avenue.

No change in present operation. From Ferry Loop via Market Street, Valencia Street, Mission Street, and Twenty-ninth Street to Noe Street. One-half of main line service to operate to this terminal. One-quarter of main line service between Ferry Loop and Twenty-ninth and Mission Streets to operate via Mission Street and Cortland Avenue to Folsom Street. One-quarter of main line service between Ferry Loop and Twenty-ninth and Mission Streets to operate via Mission Street and Richland Avenue to Andover Street. Return from Andover Street via Richland Avenue, Leese Street, Mission Street, and reverse of above route to Ferry Loop.

One Way Distance, Miles		
20(a)	Valencia and Twenty-ninth Streets:	
	Ferry to Twenty-ninth and Noe	4.78
20(b)	Valencia Street and Richland Avenue:	
	Ferry to Twenty-ninth and Mission	4.21
	Twenty-ninth and Mission to Richland and Andover	1.00
		5.21
20(c)	Valencia Street and Cortland Avenue:	
	Ferry to Twenty-ninth and Mission	4.21
	Twenty-ninth and Mission to Cortland and Folsom	.77
		4.98

One Way Running Time, Minutes		**Day**	**Night**
20(a)	Valencia and Twenty-ninth Streets:		
	Ferry to Powell and Market	8.0	6.0
	Market, Powell to Jones	2.0	2.0
	Market, Jones to Larkin	2.0	2.0
	Market, Larkin to Gough and Valencia	3.0	2.0
	Valencia, Market to Sixteenth	3.0	3.0
	Valencia, Sixteenth to Twenty-second	3.5	3.0
	Valencia, Twenty-second to Twenty-ninth and Mission	4.5	4.0
		26.0	22.0

	Twenty-ninth and Mission to Noe	3.0	3.0
		29.0	25.0
20(b)	Valencia Street and Richland Avenue		
	Ferry to Twenty-ninth and Mission	26.0	22.0
	Twenty-ninth and Mission to Richland and Andover	6.0	6.0
		32.0	28.0
20(c)	Valencia Street and Cortland Avenue:		
	Ferry to Twenty-ninth and Mission	26.0	22.0
	Twenty-ninth and Mission to Cortland and Folsom	5.5	5.5
		31.5	27.5

PROPOSED SCHEDULE.

20(a) Valencia and Twenty-ninth Streets.

From	To	Hours	Headway	Running Time	Cars	Car Hours	Round Trips
5:30 A. M.	6:10 A. M.	.67	10	60	6	4	4
6:10	7:15	1.08	10	60	6	7	7
7:15	8:40	1.42	4	68	17	24	21
8:40	11:30	2.83	6	66	11	31	29
11:30	4:20 P. M.	4.83	6	66	11	54	49
4:20 P. M.	5:40	1.33	4	72	18	24	20
5:40	8:30	2.83	8	64	8	23	22
8:30	11:30	3.00	10	60	6	18	18
11:30	1:00 A. M.	1.50	10	60	6	9	9
1:00	2:30	1.50	15	60	4	6	6
							185
*2:30	5:30	3.00	30	90	3	9	*6
						209	

*Owl Car from Ferry and Market, Valencia and Mission Streets to Daly City. One Way Distance, 7.86 Mi.

Week Day Car Hours			209
Week Day Car Miles	185 × 9.56	1770	
	6 × 15.72	98	
			1868

20(b) Valencia Street and Richland Avenue.

From	To	Hours	Headway	Running Time	Cars	Car Hours	Round Trips
5:30 A. M.	6:10 A. M.	.67	10 Shuttle*	20	2	2	4
6:10	7:15	1.08	10	60	6	7	7
7:15	8:40	1.42	8	72	9	13	11
8:40	11:30	2.83	12	72	6	17	15
11:30	4:20 P. M.	4.83	12	72	10	29	25
4:20 P. M.	5:40	1.33	8	80	8	15	11
5:40	8:30	2.83	8	64	6	23	22
8:30	11:30	3.00	10	60	2	18	18
							109
11:30	2:30 A. M.	3.00	10–15 Shuttle*	20–30		6	15
						130	

*Shuttle from Twenty-ninth and Mission Streets to Richland Avenue and Andover Street. One Way Distance, .96 Mi.

Week Day Car Hours			130
Week Day Car Miles	109 × 10.42	1140	
	19 × 1.92	37	1177

20(c) Valencia Street and Cortland Avenue.

From	To	Hours	Head-way	Running Time	Cars	Car Hours	Round Trips
5:30 A. M.	6:10 A. M.	.67	(10 Shuttle*	10	1	1	4
6:10	7:15	1.08	(10	10	1	1	7
							11
7:15	8:40	1.42	8	72	9	13	11
8:40	11:30	2.83	12	72	6	17	15
11:30	4:20 P. M.	4.83	12	72	6	29	25
4:20 P. M.	5:40	1.33	8	80	12	16	12
							63
5:40	8:30	2.83	(8	8	1	3	22
8:30	11:30	3.00	(10 Shuttle*	10	1	3	18
11:30	2:30 A. M.	3.00	(10–15	10–5	1	3	15
						86	55

*Shuttle from Mission Street to Folsom Street on Cortland Avenue. One Way Distance, .54 Mi.

Week Day Car Hours..... 86
Week Day Car Miles 63 × 9.96..... 630
66 × 1.08..... 72 702

Traffic checks show that less than twenty per cent of the business of this line is done after the cars turn on to Twenty-ninth Street. By splitting this route three ways ample service is provided to the three terminals, namely:

Twenty-ninth and Noe Streets.
Cortland Avenue and Folsom Street.
Richland Avenue and Andover Street.

This also releases the present south ends of the Numbers 23 and 24 lines for service which it is believed will be more effective over the routes proposed under Numbers 29 and 30.

PROPOSED ROUTE NO. 21.

(a) SUNNYSIDE-HAIGHT STREET AND INGLESIDE.
(b) SAN JOSE AVENUE-HAIGHT STREET AND INGLESIDE.

Market Street Line No. 10—Guerrero Street and Sunnyside.
Market Street Line No. 26—Guerrero Street and Daly City.
Market Street Line No. 17—Haight Street and Ingleside.

From Gennessee Street via Monterey Boulevard, Diamond Street, Chenery Street, Thirtieth Street, San Jose Avenue, Guerrero Street, Fourteenth Street, Mission Street, Fifth Street, Market Street, Haight Street, Stanyan Street, Frederick Street, Lincoln Way, Twentieth Avenue, Wawona Street and Nineteenth Avenue to Sloat Boulevard. (See also Line No. 26.)

One Way Distance, Miles

21(a) Sunnyside-Haight Street and Ingleside:
Mission and Fifth to Sunnyside (Monterey and Gennessee)..... 5.32
Fifth Street, Mission to Market..... .12
Fifth and Market to Nineteenth and Sloat..... 6.59
12.03

(Present Route No. 10 6.50)
(Present Route No. 17 7.50)
(Present Route No. 26 8.03)

21(b)	San Jose Avenue-Haight Street and Ingleside	1.53
		13.56

(No. 26.....8.03)
(No. 10.....6.50)

(1.53)

One Way Running Time, Minutes	Day	Night
21(a) Sunnyside-Haight Street and Ingleside:		
Monterey and Gennessee to Diamond	6.0	5.0
Diamond to Twenty-ninth and San Jose	6.0	5.0
Twenty-ninth and San Jose to Sixteenth and Guerrero	8.0	8.0
Sixteenth and Guerrero to Fifth and Market	10.5	9.5
Market, Fifth to Jones	2.0	2.0
Market, Jones to Larkin	2.0	2.0
Market, Larkin to Haight and Gough	3.0	2.0
Haight, Gough to Masonic	8.0	7.0
Haight, Masonic to Stanyan	3.0	3.0
Haight and Stanyan to Twentieth and Lincoln	8.0	8.0
Twentieth and Lincoln to Nineteenth and Sloat	11.0	10.0
	67.5	61.5
Less Gennessee to San Jose	6.0	5.0
	61.5	56.5
21(b) San Jose Avenue-Haight Street and Ingleside:		
Daly City to Geneva and San Jose	6.0	6.0
Monterey and Diamond	6.0	6.0
	73.5	68.5

PROPOSED SCHEDULE.

21(a) Sunnyside—Haight Street and Ingleside.

From	To	Hours	Headway	Running Time	Cars	Car Hours	Round Trips
5:30 A. M.	6:10 A. M.	.67	24	144	6	4	2
6:10	7:15	1.08	18	144	8	9	4
7:15	8:40	1.42	10	150	17	25	9†
8:40	11:30	2.83	12	144	12	34	15
11:30	4:20 P. M.	4.83	12	144	12	58	25
4:20 P. M.	5:40	1.33	8	152	23	31	10‡
5:40	8:30	2.83	15	150	10	29	12
8:30	11:30	3.00	15	135	9	27	12
11:30	1:00 A. M.	1.50	15	135	9	14	6
							95
*1:00 A. M.	5:00	4.00	60	120	2	8	*4
						239	

*Owl—Sunnyside to Ingleside via Eighth Street. One Way Distance, 10.99 Miles.

†2 Trippers Fifth and Market to Sunnyside.

‡4 Trippers Fifth and Market to Sunnyside.

Week Day Car Hours			239
Week Day Car Miles	6 × 10.88	66	
	95 × 24.06	2290	
	4 × 21.98	88	2344

21(b) San Jose Avenue—Haight Street and Ingleside.

From	To	Hours	Headway	Running Time	Cars	Car Hours	Round Trips
5:30 A. M.	6:10 A. M.	.67	24	144	6	4	2
6:10	7:15	1.08	18	144	8	9	4
7:15	8:40	1.42	10	160	18	26	9†
8:40	11:30	2.83	12	156	13	37	15
11:30	4:20 P. M.	4.83	12	156	13	63	25
4:20 P.M.	5:40	1.33	8	160	24	32	10‡
5:40	8:30	2.83	15	150	10	29	12
8:30	11:30	3.00	15	150	10	30	12
11:30	1:00 A. M.	1.50	15	150	10	15	6
						245	95

† 2 Trippers—Daly City to Fifth and Market) One Way Distance
‡ 4 Trippers—Daly City to Fifth and Market) 7.01 Mi.

Week Day Car Hours..... 245
Week Day Car Miles 95 × 27.12.....2580
6 × 14.02..... 84 2664

This is one of the lines turned off Market Street after reaching the business district so as to avoid excess service to the ferries. The passengers originating in the Sunset District, south of Lincoln Way, desiring to go to the Ferry or to lower Market Street, can get better service by transferring either to the proposed No 11-a or to the proposed line No. 18.

Those on Haight Street desiring to go to the Ferry can secure this service via the proposed No. 17 line. Those using the present No. 10 or No. 26 lines get direct service to Fifth and Market Street, and by transferring have direct access to the Ferry and lower Market Street via either Mission Street or Market Street. After 6 P. M. both the present No. 10 and No. 26 lines have been terminating at Eighth and Market Streets. Traffic checks show that these lines do less than twenty-two per cent of their through business east of Fifth Street.

Market Street Line No. 11—Mission and Twenty-fourth Streets.

To be combined with Proposed Route No. 12.

PROPOSED ROUTE NO. 22.

MISSION STREET AND INGLESIDE.

Market Street Line No. 12—Mission Street and Ingleside.

No change in present operation. From Ferry via Embarcadero, Mission Street, Onondaga Avenue, Ocean Avenue, Junipero Serra Boulevard, and Sloat Boulevard to Great Highway.

One Way Distance (same as present)..... 10.25 Ml.
Week Day Car Hours (same as present)..... 197
Week Day Car Miles (same as present).....2191
Maximum Number of Cars..... 17

PROPOSED ROUTE NO. 23.

MISSION STREET AND DALY CITY.

Market Street Line No. 14—Mission Street and Daly City.

No change in present operation. From Ferry via Mission Street to San Jose Avenue (Daly City).

One Way Distance (same as present..... 7.83 Miles
Week Day Car Hours (same as present)..... 182
Week Day Car Miles (same as present).....1871
Maximum Number of Cars (same as present)..... 19

Market Street Line No. 15—Kearny Street and North Beach.

To be combined with present Municipal "D" line under Proposed Route No. 4.

PROPOSED ROUTE NO. 24.
(a) THIRD AND SANSOME STREETS.
(b) THIRD AND KEARNY STREETS.

Market Street Line No. 16—Third and Kearny Streets.
Portions of Market Street Line No. 29—Kearny Street and Broadway.
Market Street Line No. 34—Sixth and Sansome Streets.

From County Line at Sunny Dale Avenue (Visitacion Valley) via San Bruno Avenue, Third Street, Kearny Street, Bush Street, and Sansome Street, to Chestnut Street and Embarcadero. One-half main line service to be turned back at Wilde and San Bruno Avenues on south end of line. One-half main line service on north end of line to be routed from Bush Street via Kearny Street to cross-over north of Washington Street.

One Way Distance, Miles		
24(a) Third and Sansome Streets:		
County Line to Kearny and Bush	6.23	
Kearny and Bush to Sansome and Chestnut	1.14	7.37
(Present No. 16 Route, 7.47.)		
24(b) Third and Kearny Streets:		
County Line to Kearny and Washington	6.57	
Less County Line to Wilde and San Bruno	.74	5.83

One Way Running Time, Minutes	Day	Night
24(a) Third and Sansome Streets:		
Visitacion to Wilde and San Bruno	3.5	3.5
Wilde and San Bruno to Twenty-third and Third	13.0	12.5
Twenty-third and Third to S. P. Depot	8.0	7.0
S. P. Depot to Third and Market	6.0	5.0
Third and Market to Kearny and Bush	3.0	2.5
	33.5	30.5
Kearny and Bush to Sansome and Embarcadero	7.5	6.5
	41.0	37.0
24(b) Third and Kearny Streets		
Wilde and San Bruno to Kearny and Bush	30.0	27.0
Kearny and Bush to Washington and Kearny	2.0	2.0
	32.0	29.0

PROPOSED SCHEDULE.
24(a) Third and Sansome Streets.

From	To	Hours	Headway	Running Time	Cars	Car Hours	Round Trips
5:30 A. M.	6:10 A. M.	.67	10	80	8	6	4
6:10	7:15	1.08	8	80	10	11	8
7:15	8:40	1.42	8	88	11	16	11
8:40	11:30	2.83	8	88	11	31	22
11:30	4:20 P. M.	4.83	8	88	11	53	37
4:20 P. M.	5:40	1.33	8	96	12	16	10
5:40	8:30	2.83	20	80	4	12	9
8:30	11:30	3.00	20	80	4	12	9
11:30	1:00 A. M.	1.50	30	90	3	5	3
						162	113

Week Day Car Hours 162
Week Day Car Miles 113 × 14.74 1670

PROPOSED SCHEDULE, (Continued)

24(b) Third and Kearny Streets.

From	To	Hours	Headway	Running Time	Cars	Car Hours	Round Trips
6:10 A. M.	7:15	1.08	8	64	8	9	8
7:15	8:40	1.42	8	72	9	13	11
8:40	11:30	2.83	8	72	9	26	22
11:30	4:20 P. M.	4.83	8	72	9	44	37
4:20 P. M.	5:40	1.33	8	72	9	12	10
5:40	8:30	2.83	20	60	3	9	9
8:30	11:30	3.00	20	60	3	9	9
11:30	1:00 A. M.	1.50	30	60	2	3	3
						125	109

Week Day Car Hours..... 125

Week Day Car Miles 109 × 11.66..... ..1275

The rerouting of the Union Street line, Proposed Route No. 5, over Broadway and the Embarcadero to the Ferry Building, takes care of the service operated by the present No. 16 line and this service has been transferred to Sansome Street.

Traffic checks on the present No. 34 line, Sixth and Sansome Streets, show a large interchange of passengers at Kearny, Sutter and Bush Streets. These transfer passengers will not be affected by the proposed change in routing of this line.

The traffic checks show that approximately thirty per cent of the line's total passengers use only the portion of the line north of Post Street.

It is proposed to operate one-half of the service on this line via Bush and Sansome Streets to Chestnut and the Embarcadero. The day service will be the same as at present and the night headway will be reduced from 42 to 20 minutes. One-half of this service—No. 24-b—wil be operated north on Kearny Street to Washington Street, and turn back at this point, thus providing transfer connection with all lines crossing Kearny Street.

Market Street Line No. 17—Haight Street and Ingleside.

To be combined with present lines Nos. 10 and 26 under Proposed Route No. 21 (a) and (b)—Sunnyside-Haight and Ingleside and San Jose—Haight and Ingleside.

PROPOSED ROUTE NO. 25.

OAK AND PAGE STREETS—DALY CITY.

Market Street Line No. 18—Mission and Daly City.

Market Street Line No. 32—Hayes and Oak Streets.

Line No. 18 to be combined with Line No. 32. From San Jose Avenue (Daly City) via Mission Street, Fourth Street, Market Street, Hayes Street, Fillmore Street, Oak Street and Stanyan Street to Frederick Street. Return from Frederick Street via Stanyan Street, Page Street, Fillmore Street and reverse of above route to Daly City.

One Way Distance, Miles

Daly City to Fourth and Mission	6.82	
Fourth, Mission to Market	.12	
No. 32 Present	4.10	
Less Ferry to Fourth and Market	.95	3.15 10.09

(Present No. 32 Route.....4.10)

(Present No. 18 Route.....6.77)

One Way Running Time, Minutes	Day	Night
Daly City to Onondaga and Mission	8.0	7.0
Mission, Onondaga to Twenty-ninth	9.0	9.0
Mission, Twenty-ninth to Twenty-second	5.0	4.5
Mission, Twenty-second to Sixteenth	3.5	3.5
Mission and Sixteenth to Fourth and Market	10.0	8.5
Market, Fourth to Jones	3.0	3.0
Market, Jones to Larkin	2.0	2.0
Hayes, Market to Fillmore	5.0	4.5
Hayes and Fillmore to Oak and Divisadero	4.0	4.0
Oak and Divisadero to Haight and Stanyan	5.5	5.0
Stanyan, Haight to Frederick	1.5	1.5
	56.5	52.5

PROPOSED SCHEDULE.

From	To	Hours	Head-way	Running Time	Cars	Car Hours	Round Trips
5:30 A. M.	6:10 A. M.	.67	8	112	14	10	5
6:10	7:15	1.08	6	114	19	21	11
7:15	8:40	1.42	5	120	24	35	17
8:40	11:30	2.83	10	120	12	34	17
11:30	4:20 P. M.	4.83	10	120	12	58	29
4:20 P. M.	5:40	1.33	4	124	31	42	20
5:40	8:30	2.83	10	120	12	34	17
8:30	11:30	3.00	12	120	10	30	15
11:30	1:00 A. M.	1.50	15	120	8	12	6
						276	137

Owl service to Daly City wil be provided by the Valencia and Twenty-ninth Street line No. 20(a).

Week Day Car Hours 276
Week Day Car Miles 137 × 20.18 2770

The present No. 18 route terminates at Fifth and Market Streets so that the combining of this line with the present No. 32 route gives equivalent service.

Traffic checks on the No. 32 line show that about fifty per cent of the total line traffic is handled west of Fourth Street, and only about ten per cent of the through passengers pass Third and Kearny Streets. It is, therefore, evident that combining these two lines via Fourth Street would not greatly inconvenience the partons of either present line. The proposed betterment of service west of Fillmore Street will give needed improvement in the transfer connections at Fillmore Street, particularly during the evening hours.

PROPOSED ROUTE NO. 26.

POLK-NINTH AND BRYANT STREETS.

Market Street Line No. 19—Ninth, Larkin and Polk Streets.
Portion of Market Street Line No. 27—Bryant Street.

From North Point Street via Polk Street, Post Street, Larkin Street, and Ninth Street to Brannan Street. One-half of main line service to be diverted at Ninth and Bryant Streets via Bryant Street and Army Street to Potrero and San Bruno Avenues.

One Way Distance, Miles		
North Point to Ninth and Brannan		
Polk and North Point to Ninth and Bryant	2.68	
Bryant, Ninth to Twenty-sixth	1.55	
Twenty-sixth and Bryant to Army and San Bruno	.29	4.52

(Present Route ..... 2.79)

One Way Running Time, Minutes	Day	Night
Polk, North Point to Sutter	8.0	8.0
Polk and Sutter to Ninth and Market	6.5	6.0
Ninth, Market to Bryant	4.0	3.5
	18.5	17.5
Bryant to Brannan	0.5	0.5
	19.0	18.0
North Point to Ninth and Bryant (above)	18.5	17.5
Ninth and Bryant to Sixteenth and Bryant	4.0	3.5
Bryant, Sixteenth to Twenty-fourth	5.0	5.0
Bryant and Twenty-fourth to Army and Potrero	3.0	3.0
	30.5	29.0

PROPOSED SCHEDULE

Bryant Street Through Service.

From	To	Hours	Headway	Running Time	Cars	Car Hours	Round Trips
5:30 A. M.	6:10 A. M.	.67	14	70	5	4	3
6:10	7:15	1.08	3	69	23	25	22
7:15	8:40	1.42	4	72	18	26	22
8:40	11:30	2.83	6	72	12	34	29
11:30	4:20 P. M.	4.83	6	72	12	58	49
4:20 P. M.	5:40	1.33	2½	75	30	40	32
5:40	8:30	2.83	8	72	9	26	22
8:30	11:30	3.00	10	70	7	21	18
11:30	1:00 A. M.	1.50	10	70	7	11	9
						245	206

Brannan Street Turn Back.

From	To	Hours	Headway	Running Time	Cars	Car Hours	Round Trips
5:30 A. M.	6:10 A. M.	.67	14	42	3	2	3
6:10	7:15	1.08	..	..	..	..	..
7:15	8:40	1.42	4	44	11	16	22
8:40	11:30	2.83	6	48	8	23	29
11:30	4:20 P. M.	4.83	6	48	8	39	49
4:20 P. M.	5:40	1.33	..	..	..	..	...
5:40	8:30	2.83	8	40	5	15	22
8:30	11:30	3.00	10	40	4	12	18
11:30	1:00 A. M.	1.50	..	..	..	..	..
							143
*1:00 A. M.	5:00	4.00	30	30	1	4	*8
						111	

*Owl service from North Point and Polk Streets to Market and Larkin Streets.

One Way Distance, 2.07.

Week Day Car Hours		245
Week Day Car Miles		111
		356
Week Day Car Miles	206 × 9.04 = 1870	
	143 × 5.58 = 800	
	8 × 4.14 = 34	2704

This proposed route is an extension to the present line No. 19, which ranks sixth in the total number of passengers handled. The passengers on this route would not be affected by the change in routing, but would be benefited to the extent of any interchange in transfers between the present No. 19 and Nos. 25 and 27 lines. Transfer checks show the necessity for this direct service.

The No. 27 route, Bryant Street, handles eight-tenths of one per cent of the entire traffic in the City, so that the proposed change in routing will work no hardships.

Market Street Line No. 20—Fourth, Ellis, and O'Farrell Streets.

This line to be discontinued. Fourth Street operation will be provided by proposed Line No. 4. O'Farrell Street to be serviced by Lines 1 and 4. Track on Ellis Street to be abandoned and removed. Oak and Page Streets service will be provided by Lines Nos. 25 and 30.

PROPOSED ROUTE NO. 27.

HAYES STREET.

Market Street Line No. 21—Hayes Street.

From Ferry Loop via Market Street, Hayes Street, and Stanyan Street to Fulton Street.

One Way Distance, Miles

Ferry to Fulton and Stanyan 3.97
(Present No. 21 Route, 5.24.)

One Way Running Time, Minutes	Day	Night
Market, from Ferry to Powell	8.0	6.0
Market, Powell to Jones	2.0	2.0
Market, Jones to Hayes and Larkin	2.0	2.0
Hayes, Larkin to Fillmore	5.0	4.5
Hayes, Fillmore to Divisadero	3.0	3.0
Hayes, Divisadero to Masonic	2.0	2.0
Hayes, Masonic to Fulton and Stanyan	4.0	3.5
	26.0	23.0

PROPOSED SCHEDULE.

From	To	Hours	Headway	Running Time	Cars	Car Hours	Round Trips
5:30 A. M.	6:10 A. M.	.67	12	48	4	3	4
6:10	7:15	1.08	7½	60	8	9	9
7:15	8:40	1.42	4	64	16	23	21
8:40	11:30	2.83	7	63	9	26	25
11:30	4:20 P. M.	4.83	7	63	9	44	42
4:20 P. M.	5:40	1.33	3	66	22	30	27
5:40	8:30	2.83	7	56	8	23	25
8:30	11:30	3.00	7½	52½	7	21	24
11:30	1:00 A. M.	1.50	12	60	5	8	8
						187	185

Week Day Car Hours 187
Week Day Car Miles 185 × 7.94 1470

This route will remain as at present from the Ferry Loop to Stanyan and Fulton Streets, and will be turned back from this point instead of operating over Fulton and Eighth Avenue. The service over Eighth Avenue will be provided by Proposed Route No. 16(b).

Traffic checks of the present No. 21 line show that about twenty per cent of the traffic originates west of Stanyan Street and rides to points east of Stanyan. These are the only passengers who might be inconvenienced by the change in

routing, but those of this twenty per cent destined to points in the business district would be better served by Proposed Route No. 16(b) which would enter the business district via McAllister Street.

PROPOSED ROUTE NO. 28.

FILLMORE AND SIXTEENTH STREETS.

Market Street Line No. 22—Fillmore and Sixteenth Streets.

No change in present operation. From Broadway via Fillmore Street, Duboce Avenue, Church Street, Sixteenth Street, Kansas Street, Seventeenth Street, Connecticut Street, Eighteenth Street, and Third Street to Twenty-third Street. One-half of main line service to turn back at Sixteenth and Bryant Streets in place of the present two-thirds operation.

One Way Distance, same as present.
To Twenty-third and Third Streets, 5.11 Mi.
To Sixteenth and Bryant Streets, 3.09 Mi.

PROPOSED SCHEDULE.

Twenty-third and Third Streets—Through Service.

From	To	Hours	Headway	Running Time	Cars	Car Hours	Round Trips
5:30 A. M.	6:10 A. M.	.67	10	70	7	5	4
6:10	7:15	1.08	6	72	12	13	11
7:15	8:40	1.42	3	84	28	40	28
8:40	11:30	2.83	6	84	14	40	29
11:30	4:20 P. M.	4.38	6	84	14	68	49
4:20 P. M.	5:40	1.33	3	84	28	37	27
5:40	8:30	2.83	7	70	10	29	25
8:30	11:00	2.50	7	70	10	25	22
11:00	12:00 A. M.	1.00	10	70	7	7	6
12:00 A. M.	1:00	1.00	16	80	5	5	4
1:00	2:00	1.00	30	90	3	3	2
2:00*	5:00	3.00	30	90	3	9	*6
5:00	5:30	.50	30	90	3	2	1
						283	214

*Owl cars from Broadway and Fillmore Streets to Wilde and San Bruno Avenues via Third Street. One Way Distance, 7.88 Mi.

Sixteenth and Bryant Streets Turnback.

From	To	Hours	Headway	Running Time	Cars	Car Hours	Round Trips
5:30 A. M.	6:10 A. M.	.67	..	..	..	..	..
6:10	7:15	1.08	..	..	..	..	..
7:15	8:40	1.42	..	..	..	..	..
8:40	11:30	2.83	6	54	9	26	29
11:30	4:20 P. M.	4.83	6	54	9	44	49
4:20 P. M.	5:40	1.33	..	..	..	..	..
5:40	8:30	2.83	7	56	8	23	25
8:30	11:00	2.50	7	56	8	20	22
11:00	12:00 A. M.	1.00	10	50	5	5	6
12:00 A. M.	1:00	1.00	16	48	3	3	4
1:00	2:00	1.00	30	60	2	2	2
2:00*	5:00	3.00	..	..	..	..	..
5:00	2:30	.50	30	60	2	1	1
						124	138

Week Day Car Hours		124	
		283	407
Week Day Car Miles	214 × 10.22	2190	
	6 × 5.54	34	
	138 × 6.18	860	3084

This route is the second heaviest in the city in number of total passengers. On account of discontinuing the present No. 30 Route which operates from Eighth and Market Streets it will be necessary to increase the amount of service beyond Sixteenth and Bryant Streets. At present every third car operates through to Twenty-third and Third Streets on a nine minute headway. It is proposed to alternate cars through giving a six minute headway.

PROPOSED ROUTE NO. 29.

JACKSON-VALENCIA AND ARMY STREETS.

Market Street Line No. 23—Fillmore and Valencia Streets.

Portion of Market Street Line No. 30—Eighth and Army Streets.

From California Street via Presidio Avenue, Jackson Street, Fillmore Street, McAllister Street, Gough Street, Market Street, Valencia Street, Twenty-sixth Street, Bryant Street, Army Street, and Third Street to Twenty-third Street.

One Way Distance, Miles		
California and Presidio to Sutter and Fillmore	1.44	
Sutter and Fillmore to Twenty-second and Valencia	2.68	
Valencia, Twenty-second to Twenty-sixth	.44	
Twenty-sixth, Valencia to Mission	.13	
Twenty-sixth, Mission to Bryant	.51	
Twenty-sixth and Bryant to Army and Bryant	.09	
Army, Bryant to Third	1.17	
Third, Army to Twenty-third	.35	6.81
Less Potrero and Army to Twenty-third and Third		1.32
		5.49

(Present Line No. 23.....5.08)
(Present Line No. 30.....5.76)

One Way Running Time, Minutes	Day	Night
Presidio and California to Sutter and Fillmore	9.0	8.0
Sutter and Fillmore to Turk and Fillmore	3.5	3.5
Turk and Fillmore to Gough and Market	7.0	6.0
Gough and Market to Sixteenth and Valencia	3.0	3.0
Valencia, Sixteenth to Twenty-second	3.5	3.0
Valencia and Twenty-second to Twenty-sixth and Mission	2.5	2.5
Twenty-sixth and Missiin to Army and Potrero	6.5	6.0
	35.0	32.0
Army and Potrero to Twenty-third and Third	6.5	6.5
	41.5	38.5

PROPOSED SCHEDULE.

Twenty-third and Third Streets—Through Service.

From	To	Hours	Head-way	Running Time	Cars	Car Hours	Round Trips
5:30 A. M.	6:10 A. M.	.67	12	84	7	5	4
6:10	7:15	1.08	10	90	9	10	7
7:15	8:40	1.42	10	90	9	13	9
8:40	11:30	2.83	15	90	6	17	12
11:30	4:20 P. M.	4.83	12	96	8	39	25
4:20 P. M.	5:40	1.33	10	100	10	14	8
5:40	8:30	2.83	12	84	7	20	15
8:30	11:30	3.00	12	84	7	21	15
11:30	1:00 A. M.	1.50	15	90	6	9	6
						148	101

PROPOSED SCHEDULE, (Continued)

Pctrero and Army Streets Turnback.

From	To	Hours	Head-way	Running Time	Cars	Car Hours	Round Trips
5:30 A. M.	6:10 A. M.	.67	..	..	..	..	..
6:10	7:15	1.08	10	70	7	8	7
7:15	8:40	1.42	10	80	8	12	9
8:40	11:30	2.83	15	90	6	17	12
11:30	4:20 P. M.	4.83	12	84	7	34	25
4:20 P. M.	5:40	1.33	10	80	8	11	8
5:40	8:30	2.83	12	72	6	17	15
8:30	11:30	3.00	12	72	6	18	15
11:30	1:00 A. M.	1.50	15	75	5	8	6
						125	97
Week Day Car Hours						148	
						273	
Week Day Car Miles	101 × 13.62				1380		
	97 × 10.98				1065	2445	

Traffic checks indicate that by the time this line reaches Market Street northbound, almost thirty per cent of the passengers picked up have been discharged and that seventy-five per cent of the total number of passengers have been picked up. North of Market Street more than ninety per cent of the total passengers have been discharged before the car turns off Fillmore Street. Half of the remaining ten per cent of the passengers transfer from this line at Sacramento and Divisadero Streets. These transfer passengers will be better served by the operation of Proposed Route No. 14, Sutter, Sacramento, and Sixth Avenue, or by transferring to the Sutter Street lines at Sutter and Fillmore.

Approximately eight per cent of the passengers northbound transfer to the Market Street lines. These passengers will be better served by the change proposed as they will have identically the same service over Proposed Route No. 20(c), and can continue east on Market Street without transfers.

In the southbound direction more than five per cent of the passengers transfer from Market Street lines to this line, and at Twenty-ninth and Mission Streets six per cent of the passengers are picked up. Some of these no doubt originate on the present No. 9 line. This eleven per cent will get through service from Market Street.

At the westerly end of the line more than four per cent of the passengers are discharged before the car reaches Geary Street. These passengers show that they are bound downtown and will receive direct service via Sutter Street through the establishment of Route No. 14.

PROPOSED ROUTE NO. 30.

DIVISADERO AND TWENTY-FOURTH STREETS.

Market Street Line No. 24—Mission and Richland Avenue.

Portion of Market Street Line No. 35—Howard Street.

From Rhode Island Street via Twenty-fourth Street, Mission Street, Sixteenth Street, Church Street, Duboce Avenue, Fillmore Street, Oak Street, and Divisadero Street to Jackson Street. Return from Jackson Street via Divisadero Street, Page Street, Fillmore Street, and reverse of above route to Twenty-fourth and Rhode Island Streets. One-half of main line service to turn back at Sacramento and Divisadero Streets.

One Way Distance, Miles

Divisadero, Jackson to Sacramento	.18
Sacramento to Ellis	.52
Ellis to Page	.65
Page, Divisadero to Fillmore	.37
Page and Fillmore to Sixteenth and Mission	1.13
Mission, Sixteenth to Twenty-second	.67
Twenty-second to Twenty-fourth	.22
Twenty-fourth, Mission to Rhode Island	.94
	4.68
Less Divisadero, Jackson to Sacramento	.18
	4.50

(Present Route No. 24, 7.32.)

One Way Running Time, Minutes	Day	Night
Sacramento and Divisadero to Page and Fillmore	10.0	10.0
Page and Fillmore to Sixteenth and Mission	7.0	7.0
Mission, Sixteenth to Twenty-second	4.0	3.5
Twenty-second and Mission to Twenty-fourth and Howard	3.0	2.5
Twenty-fourth, Howard to Rhode Island	6.0	5.0
	30.0	28.0

PROPOSED SCHEDULE.

From	To	Hours	Headway	Running Time	Cars	Car Hours	Round Trips
5:30 A. M.	6:10 A. M.	.68	10	70	7	5	4
6:10	7:15	1.08	7½	75	10	11	9
7:15	8:40	1.42	6	72	12	17	14
8:40	11:30	2.83	6	72	12	34	29
11:30	4:20 P. M.	4.83	6	72	12	58	49
4:20 P. M.	5:40	1.33	4½	76	19	26	20
5:40	8:30	2.83	7½	75	10	29	23
8:30	11:30	3.00	7½	75	10	30	24
11:30	1:00 A. M.	1.50	12	60	5	8	8
						218	180

Week Day Car Hours 218
Week Day Car Miles 180 × 9.18* 1660

*Average route distance used as alternate cars will turn back at Sacramento and Divisadero Streets.

This line shows very little business on the outer end eastbound and southbound, the net number of passengers reaching Divisadero Street being approximately thirteen per cent of the line total. All of the passengers beyond that point will be equally well served by this proposed route, except those intending to leave the cars on Cortland Avenue which will then be served by Proposed Route No. 20(b), this route giving direct service down Market Street.

The number of transfers collected at Valencia and Sixteenth Streets, at Mission and Sixteenth Streets, at Valencia and Mission Streets, and Twenty-ninth and Mission Streets, indicates that a large number of the patrons using the south end of the line transfer from lines which go downtown. South of Valencia and Sixteenth Streets the present service picks up more than thirty-five per cent of its total number of passengers. These will be well served by the proposed new routing.

The northbound and westbound figures show that between six and seven per cent of the passengers transfer at Twenty-ninth and Mission Streets to cars running downtown, and that another eight per cent transfer at Sixteenth and Mission Streets.

The next heaviest point of transfer is at Haight and Fillmore Streets where seven per cent transfer. The passengers originating south of Twenty-fourth Street can make this same transfer at Haight and Market Street from Proposed Routes 20(b) or 29. If picked up north of Twenty-fourth Street the present transfers may be made.

Market Street Line No. 25—San Bruno Avenue.

This line is to be combined with the present "H" line under Proposed Route No. 6.

Market Street Line No. 26—Guerrero Street and Daly City.

To be combined with Line No. 17. From Mission Street (Daly City) via San Jose Avenue, Diamond Street, Chenery Street, Thirtieth Street, San Jose Avenue, Guererro Street, Fourteenth Street, Mission Street, Fifth Street, Market Street, Haight Street, Stanyan Street, Frederick Street, Lincoln Way, Twentieth Avenue, Wawona Street, and Nineteenth Avenue to Sloat Boulevard. (See also line No. 10.)

Market Street Line No. 27—Bryant Street.

This line to be discontinued. Second Street service to be provided by Line No. 34. Bryant Street service to be provided by Line No. 33 between Second Street and Ninth Street and by Line No. 19 between Ninth Street and Army Street. Twenty-sixth Street service between Bryant Street and Mission Street to be given by Line No. 23.

PROPOSED LINE NO. 31.

FERRY-SOUTHERN PACIFIC DEPOT AND EIGHTH STREET.

Market Street Line No. 28—Harrison Street and Depots.

Portion of Market Street Line No. 30—Eighth and Army Streets.

Portion of Market Street Line No. 25—Bryant Street.

From Ferry via Embarcadero, Howard Street, Steuart Street, Harrison Street, Second Street, Brannan Street, Third Street, Townsend Street, Fourth Street, Brannan Street, Fifth Street, Bryant Street, and Eighth Street to Market Street. Return from Eighth and Market Streets via reverse of above route to Second and Bryant Streets then Bryant Street, Sterling Street, Harrison Street, Steuart Street, Howard Street, and Embarcadero to Ferry.

One Way Distance, Miles

Ferry to S. P. Depot	1.43	
Townsend to Fourth and Brannan	.27	
Brannan, Fourth to Fifth	.17	
Fifth, Brannan to Bryant	.12	
Bryant, Fifth to Eighth	.52	
Eighth, Bryant to Market	.60	3.11

(Present No. 28 Route 1.47)

One Way Running Time, Minutes

Ferry to First and Harrison	5.5
S. P. Depot	4.5
Fifth and Bryant	2.5
Eighth and Bryant	2.0
Eighth and Market	3.0
	17.5

PROPOSED SCHEDULE.

From	To	Hours	Headway	Running Time	Cars	Car Hours	Round Trips
6:00 A. M.	7:15	1.25	8	40	5	6	10
7.15	8:40	1.42	6	42	7	10	14
8:40	11:30	2.83	6	42	7	20	29
11:30	4:20 P. M.	4.83	6	42	7	34	49
4:20 P. M.	5:40	1.33	4½	45	10	14	18
5:40	8:30	2.83	8	40	5	15	22
8:30	11:30	3.00	10	40	4	12	18
11:30	12:12 A. M.	.70	10	40	4	3	4
						114	164
Week Day Car Hours						114	
Week Day Car Miles 164 × 6.22						1020	

The proposed route will be an extension of the present line No. 28 so that the traffic now handled by this line will not be affected by the change.

The traffic on Eighth Street between Market and Bryant now handled by the No. 30 line amounts to about three per cent of the total traffic on that line. The line itself handles less than five-tenths of one per cent of the total traffic of the City.

The proposed route will give a direct service from Eighth and Market Streets to the Southern Pacific Depot. This should prove of considerable convenience to people in the Mission, Sunset, and West of Twin Peaks District desiring to reach the S. P. Depot as the running time will be considerably shorter than via Market Street with transfer to Third or Fourth Street lines.

Market Street Line No. 29—Kearny Street and Broadway

This line to be discontinued. Service to be provided over route between Wilde Avenue and San Bruno Avenue, and Bush and Kearny Streets by Line No. 24. Between Bush and Kearny Streets, and Broadway and Kearny Street, Line No. 4 will provide the service.

Market Street Line No. 30—Eighth and Army Streets.

This line to be discontinued. Service on Eighth Street will be given by Proposed Route No. 31. Bryant Street will be served by Proposed Line No. 26. Present operation of this route between Sixteenth and Bryant Street and Twenty-third and Third Streets will be given by Proposed Line No. 28. Service between Twenty-sixth and Howard Streets and Twenty-third and Third Streets via Army Street will be given by Proposed Line No. 29. At present this line carries less than one-half per cent of the total traffic of the City.

Market Street Line No. 32—Hayes and Oak Streets.

To be combined with present No. 18 line under Proposed Route No. 25.

PROPOSED ROUTE NO. 32.

BRYANT-EIGHTEENTH STREETS AND PARK.

Market Street Line No. 33—Eighteenth Street and Park.

Market Street Line No. 27—Bryant Street.

From Frederick Street via Stanyan Street, Waller Street, Clayton Street, Frederick Street, Ashbury Street, Clayton Street, Caselli Avenue, Market Street, Eighteenth Street, Guerrero Street, Fourteenth Street, Harrison Street, Ninth Street and Bryant Street to Second Street.

One Way Distance, Miles

Present Route		4.90	
Stanyan, Frederick to Waller	.13		
Bryant, Second to Third	.17		
Ninth, Bryant to Harrison	.12	.42	5.32
Turnback, Bryant, Second to Ninth	1.15		
Bryant to Harrison	.12		1.27
			4.05

One Way Running Time, Minutes	Day	Night
Second and Bryant to Ninth and Harrison	5.5	5.5
Eighteenth and Guerrero	7.0	5.5
Caselli Avenue	8.0	7.0
Waller and Stanyan	8.0	8.0
Frederick and Stanyan	1.0	1.0
	24.0	21.5
	29.5	27.0

PROPOSED SCHEDULE.

From	To	Hours	Headway	Running Time	Cars	Car Hours	Round Trips
5:30 A. M.	6:10 A. M.	.67	15	60	4	3	3
6:10	7:15	1.08	8	64	8	9	8
7:15	8:40	1.42	6	72	12	17	14
8:40	11:30	2.83	8	72	9	26	22
11:30	4:20 P. M.	4.83	8	72	9	44	37
4:20 P. M.	5:40	1.33	5	70	14	19	16
5:40	6:30	.83	7	63	9	8	7
							107
6:30*	11:30	5.00	9½	54½	6	30	33
11:30*	1:00 A. M.	1.50	15	60	4	6	6
						162	39

*Turnback at Ninth and Harrison after 6:30 P. M.

Week Day Car Hours			162
Week Day Car Miles	107 × 10.64	1140	
	39 × 8.10	320	1460

The proposed route will remain substantially the same as at present from Frederick and Stanyan Streets to Ninth and Harrison. From this point the route will be diverted to Bryant Street one block south of Harrison instead of on Harrison Street as at present operated. This will permit the abandonment of service on Harrison Street between Third and Ninth Streets, and the service on Bryant Street will take care of the traffic now being handled by the No. 27 Line between Second Street and Ninth Street.

PROPOSED ROUTE NO. 33.

POST-SIXTH AND SECOND STREETS.

Market Street Line No. 34—Sixth and Sansome Streets.

From Market Street via Second Street, Brannan Street, Third Street, Townsend Street, Fourth Street, Brannan Street, Sixth Street, Taylor Street and Post Street to Montgomery Street.

One Way, Distance, Miles

Second and Market to Sixth and Bryant	1.28
Bryant to Townsend	.24
Townsend to Bryant	.24
Sixth Street and Bryant to Post and Kearny	1.45
Post, Kearny to Montgomery	.09
	3.30

(Present No. 34 Route, 2.83)

One Way Running Time, Minutes	Day	Night
Second and Market to S. P. Depot	7.0	6.0
S. P. Depot, Sixth and Brannan	2.0	2.0
Sixth and Brannan to Market	5.5	5.0
Sixth and Market to Post and Montgomery	9.0	6.5
	23.5	19.5

PROPOSED SCHEDULE.

From	To	Hours	Head-way	Running Time	Cars	Car Hours	Round Trips
5:30 A. M.	6:10 A. M.	.68	10	50	5	4	4
6:10	7:15	1.08	7	49	7	8	9
7:15	8:40	1.42	5	60	12	17	17
8:40	11:30	2.83	8	56	7	20	22
11:30	4:20 P. M.	4.83	7	56	8	39	42
4:20 P. M.	5:40	1.33	5	60	12	16	16
5:40	8:30	2.83	10	50	5	14	17
							127
*8:30	11:30	3.00	10	30	3	9	18
11:30	1:00 A. M.	1.50	10	30	3	5	9
						132	27

*Turnback at Sixth and Brannan after 8:30 P. M.

Week Day Car Hours	132	
Week Day Car Miles 127 × 6.60	840	
27 × 4.28	116	956

The service on Sansome Street operated by the present No. 34 Line will be taken care of under Proposed Route No. 24, Third and Sansome Streets. The southerly end of the present No. 34 Line will be extended via Brannan and Second Streets, etc., to Second and Market Streets, and will take care of traffic now handled by the present No. 27 and 41 Lines. This gives direct service to the Southern Pacific Depot from Post Street, Taylor Street, and Sixth and Market Streets.

Market Street Line No. 35—Howard Street.

This line to be discontinued. Tracks to be removed on Howard Street between Steuart Street and Twenty-sixth Street. Service on Twenty-fourth Street, between Howard Street and Rhode Island Street, to be given by Line No. 24.

This present route handles nine-tenth of one per cent of the total traffic of the City.

PROPOSED ROUTE NO. 34.

FOLSOM STREET.

Market Street Line No. 36—Folsom Street.

No change in present operation. From Ferry via Embarcadero, Howard Street, Steuart Street, Folsom Street, and Precita Avenue to York and Army Streets.

One Way Distance (same as present) ..... 4.44 Mi.
Week Day Car Hours (same as present) 108
Week Day Car Miles (same as present) 987
Maximum Number of Cars 7

Some improvement in service may be necessary on account of removing the service from Howard Street and from Harrison Street between Third and Ninth Streets.

PROPOSED ROUTE NO. 35.

SAN MATEO.

Market Street Line No. 40—San Mateo.

From Fifth and Market Streets via Fifth Street, Mission Street to Daly City, Colma, San Bruno, Burlingame, and San Mateo. Alternative route from Fifth and Market Streets via Fifth Street, Folsom Street, Twenty-sixth Street, Mission Street and above route to Daly City, Colma, San Bruno, Burlingame and San Mateo.

One Way Distance (same as present) ..... 19.98 Mi.
Week Day Car Hours (same as present) 259
Week Day Car Miles (same as present) 4053
Maximum Number of Cars (same as present) 16

Market Street Line No. 41—Second and Market Streets-Southern Pacific Depot.

This line to be discontinued. Service to be provided over this route by Proposed Line No. 33.

PROPOSED ROUTE NO. 36.

FIRST STREET AND SOUTHERN PACIFIC DEPOT.

Market Street Line No. 42—First and Fifth Streets.

Present operation of this line between Third and Townsend Streets and Fifth and Market Streets to be discontinued. It is proposed that this line will operate only from California Street via Battery Street, First Street, Folsom Street, Second Street, Brannan Street, and Third Street to Townsend Street (Southern Pacific Depot).

The service to Market and Fifth Streets is replaced by Route No. 33 to Sixth and Market Streets via Sixth Street.

One Way Distance, Miles		
Battery	.16	
First	.36	
Folsom	.17	
Second	.36	
Brannan	.17	
Third, Brannan to Townsend	.13	1.35

(Present No. 42 Route, 2.60)

One Way Running Time, Minutes	A. M. and P. M. Rush	Mid-Day
California and Battery to Third and Townsend	12	10

PROPOSED SCHEDULE.

From	To	Hours	Headway	Running Time	Cars	Car Hours	Round Trips
6:45 A. M.	9:00 A. M.	2.25	10	30	3	7	14
9:00	4:20 P. M.	7.33	20	20	1	8	22
4:20 P. M.	6:20	2.00	10	30	3	6	12
						21	48

Week Day Car Hours 21
Week Day Car Miles 48 × 2.70 130

PROPOSED ROUTE NO. 37.
FILLMORE STREET HILL.
Present Fillmore Street Hill

No change in present operation. From Broadway via Fillmore Street to Marina Boulevard.

One Way Distance (same as present)	0.87 Mi.
Week Day Car Hours (same as present)	77
Week Day Car Miles (same as present)	395
Maximum Number of Cars (same as present)	4

Present Tenth and Post Street Line

This line to be discontinued. Service on Post Street, between Montgomery Street and Taylor Street, to be provided by Proposed Line No. 33. No service to be given over this route between Post and Taylor Streets and Tenth and Bryant Streets. Track on Polk Street, between Hayes and Market Streets, and on Tenth Street, between Market and Bryant Streets, to be removed.

PROPOSED ROUTE NO. 38.
VISITACION VALLEY.
Present Visitacion Valley Line

No change in present operation. From Mission Street via Geneva Avenue, Private Right of Way, Schwerin Street, McDonald Street, and San Bruno Avenue to County Line at Sunny Dale Avenue (Visitacion Valley).

One Way Distance (same as present)	2.32 Mi.
Week Day Car Hours (same as present)	33
Week Day Car Miles (same as present)	302
Maximum Number of Cars (same as present)	2

Present Bosworth Street Line

Service over this route to be discontinued and tracks to be removed on Bosworth Street from Mission Street to Burnside Avenue.

Present Divisadero Street Extension.

This line to be discontinued. Service will be provided by alternate cars of Proposed Route No. 30.

PROPOSED ROUTE NO. 39.
SOUTH SAN FRANCISCO.
Market Street Line—South San Francisco.

From South San Francisco Junction (Leipsic Station) via Private Right of Way, Grand Avenue, Swift Avenue, and Walker Avenue to Western Meat Company.

One Way Distance (same as present)	2.88 Mi.
Week Day Car Hours (same as present)	43
Week Day Car Miles (same as present)	467
Maximum Number of Cars (same as present)	3

PROPOSED ROUTE NO. 40.
WASHINGTON AND JACKSON STREETS.
Market Street Cable Line—Washington and Jackson Streets.

No change in present operation. From Eddy and Market Streets via Powell Street, Jackson Street, Steiner Street, and Washington Street to Fillmore Street. Return from Fillmore Street via Washington Street and Powell Street to Eddy and Market Streets.

One Way Distance (same as present)	2.33 Mi.
Week Day Car Hours (same as present)	155
Week Day Car Miles (same as present)	984
Maximum Number of Cars (same as present)	14

PROPOSED ROUTE NO. 41.

POWELL AND MASON STREETS.

Market Street Cable Line—Powell and Mason Streets.

No change in present operation. From Eddy and Market Streets via Powell Street, Jackson Street, Mason Street, Columbus Avenue, and Taylor Street to Bay Street. Return from Bay Street via Taylor Street, Columbus Avenue, Mason Street, Washington Street and Powell Street to Eddy and Market Streets.

One Way Distance (same as present)	1.61 Mi.
Week Day Car Hours (same as present)	114
Week Day Car Miles (same as present)	679
Maximum Number of Cars (same as present)	8

PROPOSED ROUTE NO. 42.

SACRAMENTO AND CLAY STREETS.

Market Street Cable Line—Sacramento and Clay Streets.

No change in present operation. From Ferry via Embarcadero, Market Street, and Sacramento Street to Fillmore Street. Return from Fillmore Street via Sacramento Street, Larkin Street, Clay Street, and Embarcadero to Ferry.

One Way Distance (same as present)	2.28 Mi.
Week Day Car Hours (same as present)	137
Week Day Car Miles (same as present)	923
Maximum Number of Cars (same as present)	10

PROPOSED ROUTE NO. 43.

CASTRO STREET.

Market Street Cable Line—Castro Street.

No change in present operation. From Eighteenth Street via Castro Street to Twenty-sixth Street.

One Way Distance (same as present)	0.90 Mi.
Week Day Car Hours (same as present)	71
Week Day Car Miles (same as present)	410
Maximum Number of Cars (same as present)	5

Present Pacific Avenue Cable Line

This line to be abandoned and trackage removed from Polk Street to Divisadero Street.

PROPOSED ROUTE NO. 44.

CALIFORNIA STREET.

California Street Cable Railroad Line—California Street.

This line to be operated as a cable line between Market Street and Van Ness Avenue as outlined in the California Street Cable Railroad report. Service on California Street west of Van Ness Avenue will be given by Proposed Route No. 3, Geary and California Streets.

One Way Distance, Miles 1.46

One Way Running Time, Minutes	Day	Night
California—Market to Kearny	4.0	3.0
Kearny to Powell	2.0	2.0
Powell to Hyde	3.5	3.5
Hyde to Van Ness	2.0	2.0
	11.5	10.5

PROPOSED SCHEDULE.

From	To	Hours	Head-way	Running Time	Cars	Car Hours	Round Trips
5:30 A. M.	6:10 A. M.	.67	15	30	2	2	3
6:10	7:15	1.08	7	28	4	5	10
7:15	8:40	1.42	3	33	11	16	29
8:40	11:30	2.83	5	30	6	17	34
11:30	4:20 P. M.	4.83	5	30	6	29	58
4:20 P. M.	5:40	1.33	2½	35	14	19	32
5:40	8:30	2.83	5	30	6	17	34
8:30	11:30	3.00	7	28	4	12	26
11:30	1:00 A. M.	1.50	10	30	3	5	9
						122	235

Week Day Car Hours.....122
Week Day Car Miles 235 × 2.92.....686

PROPOSED ROUTE NO. 45.

HYDE AND JONES STREETS.

California Street Cable Line—Hyde and O'Farrell Streets.

This line was also described in the California Street Cable Railroad Report, and will operate on Jones Street from Market to Pine, on Pine Street from Jones to Hyde, and on Hyde Street from Pine to North Beach. The O'Farrell Street portion of the present Hyde and O'Farrell Street Line between Market and Jones Streets will be served by the Proposed No. 4 Line, Presidio, Kearny and North Beach.

One Way Distance, Miles.....1.98

One Way Running Time, Minutes	Day	Night
Jones—Market to O'Farrell	3.0	2.0
Jones and O'Farrell to Hyde and California	5.0	4.5
Hyde—California to Union	5.0	4.5
Hyde—Union to Beach	3.5	3.0
	16.5	14.0

PROPOSED SCHEDULE.

From	To	Hours	Head-way	Running Time	Cars	Car Hours	Round Trips
5:30 A. M.	6:10 A. M.	.67	15	30	2	2	3
6:10	7:15	1.08	7	35	5	6	10
7:15	8:40	1.42	3	36	12	16	29
8:40	11:30	2.83	5	35	7	20	34
11:30	4:20 P. M.	4.83	5	35	7	34	58
4:20 P. M.	5:40	1.33	2½	40	16	22	32
5:40	8:30	2.83	5	35	7	20	34
8:30	11:30	3.00	7	35	7	21	26
11:30	1:00 A. M.	1.50	10	30	3	5	9
						146	235

Week Day Car Hours.....146
Week Day Car Miles 235 × 3.96.....934

Present Jones Street Shuttle—California Street Cable Railroad Company.

This line will be served by Proposed Route No. 44.

PROPOSED ROUTE NO. 46.

PARK.

Municipal Railway Motor Coach Line No. 1—Park.

No change in present operation. From Tenth Avenue and Fulton Street via Golden Gate Park and Ninth Avenue to Irving Street. Return from Ninth Avenue and Irving Street via Irving Street. Tenth Avenue, Lincoln Way, Golden Gate Park to Eighth Avenue and Fulton Street, then Fulton Street to Tenth Avenue.

One Way Distance (same as present)	0.92 Mi.
Week Day Car Hours (same as present)	26
Week Day Car Miles (same as present)	289
Maximum Number of Coaches	2

PROPOSED ROUTE NO. 47.

OCEAN.

Municipal Railway Motor Coach Line No. 2—Ocean.

No change in present operation. From Cabrillo Street via Great Highway, Lincoln Way, Forty-eighth Avenue, and Great Highway to Sloat Boulevard.

One Way Distance (same as present)	2.75 Mi.
Week Day Car Hours (same as present)	36
Week Day Car Miles (same as present)	391
Maximum Number of Coaches	2

PROPOSED ROUTE NO. 48.

MONTEREY BOULEVARD.

Municipal Railway Motor Coach Line No. 3—Monterey Boulevard.

No change in present operation. From Forest Hill Station via Laguna Honda Boulevard, Portola Drive, Miraloma Drive, Yerba Buena Avenue, Plymouth Avenue, and Monterey Boulevard to Edna Street. Return from Monterey Boulevard via Edna Street, Hearst Avenue, Ridgewood Avenue, Monterey Boulevard, and reverse of above route to Forest Hill Station.

One Way Distance (same as present)	2.19 Mi.
Week Day Car Hours (same as present)	43
Week Day Car Miles (same as present)	381
Maximum Number of Coaches (same as present)	3

PROPOSED ROUTE NO. 49.

EMBARCADERO.

Municipal Railway Motor Coach Line No. 4—Embarcadero.

No change in present operation. From Golden Gate Ferry Terminal at Hyde and Jefferson Streets via Jefferson Street, Leavenworth Street, Beach Street, Embarcadero, Berry Street, and Third Street to Townsend Street. Return from Third and Townsend Streets via Townsend Street, Embarcadero, Beach Street, and Hyde Street to Golden Gate Ferry Terminal at Jefferson Street.

One Way Distance (same as present)	3.40 Mi.
Week Day Car Hours (same as present)	43
Week Day Car Miles (same as present)	411
Maximum Number of Coaches (same as present)	4

PROPOSED ROUTE NO. 50.

MARINA.

Municipal Railway Motor Coach Line No. 5.—Marina

No change in present operation. From Scott Street via Chestnut Street and Divisadero Street to Marina Boulevard. Return from Divisadero Street via Marina Boulevard and Scott Street to Chestnut Street.

One Way Distance (same as present)	0.47 Mi.
Week Day Car Hours (same as present)	18
Week Day Car Miles (same as present)	130
Maximum Number of Coaches	1

PROPOSED ROUTE NO. 51.

CROCKER-AMAZON.

Market Street Motor Coach Line—Crocker-Amazon.

No change in present operation. From Mission Street, via Persia Avenue, Naples Street, Cordova Street, Baltimore Way, South Hill Boulevard, Geneva Avenue, Naples Street, Russia Avenue, and Mission Street to Persia Avenue.

One Way Distance (same as present)	1.40 Mi.
Week Day Car Hours (same as present)	27
Week Day Car Miles (same as present)	284
Maximum Number of Coaches (same as present)	2

PROPOSED ROUTE NO. 52.

EXCELSIOR.

Market Street Motor Coach Line—Excelsior.

No change in present operation. From Mission Street via Silver Avenue, Edinburgh Street, Excelsior Avenue, Naples Street, Persia Avenue, Mission Street, Brazil Avenue, Moscow Street, Persia Avenue, Naples Street, Excelsior Avenue, and Mission Street to Silver Avenue.

One Way Distance (same as present)	1.40 Mi.
Week Day Car Hours (same as present)	27
Week Day Car Miles (same as present)	284
Maximum Number of Coaches (same as present)	2

PROPOSED ROUTE NO. 53.

MISSION STREET AND SAN BRUNO AVENUE.

Market Street Motor Coach Line—Mission Street and San Bruno Avenue.

No change in present operation. From Mission Street via Maynard Street, Craut Street, Silver Avenue, San Bruno Avenue, Felton Street, Bowdoin Street, Silver Avenue, and Mission Street to Maynard Street.

One Way Distance (same as present)	1.80 Mi.
Week Day Car Hours (same as present)	27
Week Day Car Miles (same as present)	334
Maximum Number of Coaches (same as present)	2

SUMMARY OF ROUTES.

In order to bring together the detail which has been developed through the description of the proposed routes, there are submitted two Tables, XXIX and XXX, which show each of the present and proposed routes, together with the one way

route distance, the week day car hours and car miles, and the maximum number of cars in service during the evening rush hours.

Lines which have not been changed in routing are indicated by the symbol "+."

Where the number of cars in service during the evening rush hours is marked by the symbol "*," the number does not agree with the total number of cars shown in the proposed schedule for the individual lines. This is because of the fact that, where the time required to make a round trip is greater than the period from 4:20 to 5:40 P. M., some of the cars have been taken off the route after completing their rush hour trip outbound before the last car on the close headway has left the downtown district. This was not taken into consideration in figuring the number of car hours with the thought of compensating for excess mileage and time necessary to get cars onto and off the route.

TABLE XXIX

DETAILS OF PRESENT ROUTES.
MARKET STREET RAILWAY, CALIFORNIA STREET CABLE RAILROAD AND MUNICIPAL RAILWAY.

Summary of Car Hours, Car Miles and Maximum Number of Cars Required.

Route Designation	TROLLEY Name	One Way Distance	Week-Day Car Hours	Week-Day Car Miles	Maximum Cars P. M. Rush
A	Geary and Park	4.80	220	2,069	15
B	Geary and Ocean	7.06	327	3,420	27
C	Geary and California	5.91	282	2,799	25
D	Geary and Van Ness	4.24	201	1,742	15
E	Union Street	3.77	211	1,652	13
F	Stockton Street	3.08	184	1,622	14
H	Potrero and Van Ness	4.66	241	2,250	15
J	Church Street	4.56	242	2,196	16
K	Market and Ingleside	7.67	282	3,142	23
L	Market and Taraval	7.84	253	2,830	21
M	Ocean View	2.42	26	317	2
N	Judah Street	7.28	306	3,133	24
1	Sutter and California	6.01	269	2,481	24
2	Sutter and Clement	7.39	323	3,102	28
3	Sutter and Jackson	3.78	196	1,593	16
4	Turk and Eddy	5.82	256	2,416	15
5	McAllister and Fulton	7.08	527	4,971	47
6	Haight and Masonic	5.81	359	3,003	24
7	Haight and Ocean	7.96	297	2,961	26
8	Market Street	3.31	270	2,215	23
9	Valencia Street	4.78	384	3,385	31
10	Guerrero and Sunnyside	6.50	146	1,366	13
11	Mission and Twenty-fourth	4.79	243	2,152	20
12	Mission and Ingleside	10.25	197	2,191	17
14	Mission and Daly City	7.83	182	1,871	19
15	Kearny and North Beach	2.64	155	1,422	15
16	Third and Kearny	7.47	194	1,879	12
17	Haight and Ingleside	7.70	265	2,521	20
18	Mission and Daly City	6.77	166	1,667	23
19	Ninth and Polk	2.79	252	1,994	17
20	Fourth, Ellis and O'Farrell	4.52	252	2,199	22
21	Hayes	5.24	269	2,305	25
22	Fillmore and Sixteenth	5.11	419	3,107	30
23	Fillmore and Valencia	5.08	123	1,139	9
24	Mission and Richmond	7.32	192	1,731	13
25	San Bruno Avenue	5.35	197	1,877	15

TABLE XXIX (Continued).

Route Designation	Name	One Way Distance	Week-Day Car Hours	Week-Day Car Miles	Maximum Cars P. M. Rush
	TROLLEY				
26	Guerrero and Daly City	8.03	167	1,650	14
27	Bryant Street	3.89	127	1,004	13
28	Harrison and Depots	1.47	65	472	6
29	Kearny and Broadway	6.36	206	1,558	14
30	Eighth and Army	5.76	95	838	7
32	Hayes and Oak	4.10	101	839	7
33	Eighteenth and Park	4.90	125	1,147	9
34	Sixth and Sansome	2.83	100	635	9
35	Howard Street	4.62	143	1,283	11
36	Folsom Street	4.44	108	987	7
40	San Mateo	19.98	259	4,053	16
41	Second and Market, S.P. Depot	1.01	9	40	3
42	First and Fifth	2.60	14	96	2
	Fillmore Hill	0.87	77	395	4
	Tenth and Post	2.27	12	80	1
	Visitacion Valley	2.32	33	302	2
	Divisadero Street Extension	0.18	20	55	1
	Bosworth Street	0.73	13	75	1
	South San Francisco	2.88	43	467	3
	Total Trolley	283.83	10,625	98,696	844
	CABLE				
	Washington and Jackson	2.23	155	984	14
	Powell and Mason	1.61	114	679	8
	Sacramento and Clay	2.28	137	923	10
	Castro Street	0.90	71	410	5
	Pacific Avenue	1.14	29	194	2
	California Street	2.86	298	2,170	18
	Hyde and O'Farrell	2.10	218	1,590	16
	Jones Street Shuttle	.33	35	195	2
	Total Cable	13.45	1,057	7,145	75
	Total Rail	297.28	11,682	105,841	919
	MOTORCOACH				
1	Park	.92	26	289	2
2	Ocean	2.75	36	391	2
3	Monterey Boulevard	2.19	43	381	3
4	Embarcadero	3.40	43	411	4
5	Marina	.47	18	130	1
	Crocker-Amazon	1.40	27	284	2
	Excelsior	1.40	27	284	2
	Mission-San Bruno	1.80	27	334	2
	Total Motorcoach	14.33	247	2,504	18
	Grand Total	**311.61**	**11,929**	**107,880**	**937**

TABLE XXX

COMBINED ROUTING.

Summary of Car Hours, Car Miles and Maximum Number of Cars Required.

Proposed Route Number	TROLLEY Route	Name	One Way Route Distance	Week-Day Car Hours	Week-Day Car Miles	Maximum Cars P. M. Rush
1		Tenth Ave., Geary and Stockton	6.96	390	3,520	31*
2+		Geary and Ocean	7.06	327	3,420	27
3		Geary and California	5.91	281	2,710	27*
4		Presidio-Kearny and North Beach	7.11	379	3,027	33*
5		Union Street	3.74	196	1,510	13
6		Van Ness-Potrero and San Bruno	6.94	348	3,282	29*
7		Church and Mission	4.73	256	2,290	17
8+		Market and Ingleside	7.67	282	3,142	23
9+		Market and Taraval	7.84	252	2.830	21
10+		Ocean View	2.42	26	317	2
11a		Judah and Beach	7.33	183	1,790	16
11b		Duboce and Ninth Avenue	5.70	165	1,440	14
12		Sutter-Mission and 24th	9.98	454	4,400	39*
13+		Sutter and Clement	7.39	323	3,102	28
14		Sutter-Sacramento and Sixth Avenue	4.78	246	2,153	20
15		Turk and Eddy	1.80	97	750	8
16a		McAllister and Fulton	7.08	297	2,850	27
16b		McAllister and Eighth Avenue	5.08	234	1,966	21
17		Haight and Masonic	5.03	216	1,750	20
18		Lincoln Way and Ocean	7.83	253	2,647	24
19+		Market Street	3.31	270	2,215	23
20a		Valencia and Twenty-ninth	4.78	209	1,868	16*
20b		Valencia and Richland	5.21	130	1,177	10
20c		Valencia and Cortland	4.98	86	702	11*
21a		Sunnyside-Haight and Ingleside	12.03	239	2,344	20*
21b		San Jose-Haight and Ingleside	13.56	245	2,664	21*
22+		Mission and Ingleside	10.25	197	2,191	17
23+		Mission and Daly City	7.83	182	1,871	19
24a		Third and Sansome	7.37	162	1,670	12
24b		Third and Kearny	5.83	125	1,275	9
25		Oak and Page-Daly City	10.09	276	2,770	27*
26		Polk—Ninth and Byrant	4.52	356	2,704	25*
27		Hayes	3.97	187	1,470	20*
28+		Fillmore and Sixteenth	5.11	407	3,084	28
29		Jackson-Valencia and Army	6.81	273	2,445	18
30		Divisadero and Twenty-fourth	4.68	218	1,660	16*
31		Ferry-S. P. Depot and Eighth	3.11	114	1,020	10
32		Bryant—Eighteenth and Park	5.32	162	1,460	13*
33		Post—Sixth and Second	3.30	132	952	12
34+		Folsom Street	4.44	108	987	7
35+		San Mateo	19.98	259	4,053	16
36		First and S. P. Depot	1.35	21	130	3
37		Fillmore Hill	0.87	77	395	4
38+		Visitacion Valley	2.32	33	302	2
39+		South San Francisco	2.88	43	467	3
	Total Trolley		**276.28**	**9,716**	**90,772**	**802**

TABLE XXX (Continued).

COMBINED ROUTING.

Summary of Car Hours, Car Miles and Maximum Number of Cars Required.

Proposed Route Number	CABLE Route Name	One Way Route Distance	Week-Day Car Hours	Week-Day Car Miles	Maximum Cars P. M. Rush
40+	Washington and Jackson	2.23	155	984	14
41+	Powell and Mason	1.61	114	679	8
42+	Sacramento and Clay	2.28	137	923	10
43+	Castro Street	0.90	71	410	5
44	California Street	1.46	122	686	14
45	Hyde and Jones	1.98	146	934	16
	Total Cable	**10.46**	**745**	**4,616**	**67**
	Total Rail	**286.74**	**10,461**	**95,388**	**869**
	MOTORCOACH				
46+	Park	.92	26	289	2
47+	Ocean	2.75	36	391	2
48+	Monterey Boulevard	2.19	43	381	3
49+	Embarcadero	3.40	43	411	4
50+	Marina	.47	18	130	1
51+	Crocker-Amazon	1.40	27	284	2
52+	Excelsior	1.40	27	284	2
53+	Mission-San Bruno	1.80	27	334	2
	Total Motorcoach	**14.33**	**247**	**2,504**	**18**
	GRAND TOTAL	**301.07**	**10,708**	**97,892**	**887**

Detailed schedules, which have been worked out for a number of routes, in every case check the maximum number of cars in service at one time and show that the allowances made in the method of preparing the proposed schedule are ample to cover the actual car hours which will have to be operated when detailed schedules are prepared. It has, therefore, been unnecessary to make other allowances in order to compensate them for additional costs.

Traffic and Schedule Studies

Before leaving the subject of rerouting, it would be well to point out the savings which it has been possible to effect through the study which has been made. The present total car hours of the three systems is 4,166,000. Calculations show that between 9.9% and 10.4% of this number, amounting to between 412,000 and 433,000 car hours, may be saved. Similar savings on the present 37,815,000 car miles amount to between 3,750,000 and 3,930,000. These figures for car hours and car miles are annual figures. The details given in Table XLII and XLIII show that, comparing municipal operation of the present mileage with municipal operation of the proposed mileage, there will be effected a saving of more than a million dollars a year.

These results clearly demonstrate the possibilities which may be secured through a detailed study of traffic and traffic conditions, and emphasize the necessity for constantly following this phase of street railway operation.

In order further to indicate the importance of this division of the work, I am quoting from "Electric Railway Transportation" by Henry W. Blake and Walter Jackson:

> "The importance of the timetable is best explained by the statement that it is the basis used in absorbing anywhere from 30 to 50 per cent of the total operating expenses. Therefore, the schedule maker is far more important from the standpoint of what he can save or gain for the railway than is the head of any engineering department. Despite this, schedule making is an infant industry when compared to the development of scientific practices for the way, line, power and car maintenance divisions. While the schedule department is of later creation, it is plain that this department is the most potent factor of all in the welfare of the public, the employees and the company."

Adjustment of Present Headways.

In the table entitled "Analysis of Present Traffic and Service" following the list of routes in the appendix there is shown the loading of the street cars on twenty-nine of the electric lines of the Market Street Railway Company at four different periods of the day. The figures in the tables were taken from the point checks and show the number of passengers passing the peak load point of the line in the maximum twenty minute period of the morning, mid-day, evening rush, and night hours. The table shows the total number of passengers, the number of cars, the average load per car, and the date on which the check was made. These in general show that the service is so adjusted as very closely to meet the actual requirements. Such deviations from this adjustment of service as were found desirable have been taken up in the schedules laid out under the proposed plan of rerouting.

CHAPTER VIII.
ADJUSTMENT OF TRACKS

In order to place in effect the routings which have been proposed, it will be necessary to construct some new track to connect sections of road not now connected and to put in new special work at a large number of places throughout the system. The new track required is shown in Table XXXI.

TABLE XXXI

NEW TRACK CONSTRUCTION REQUIRED BECAUSE OF REROUTING.

On	From	To	S. T. Mile	Estimated Cost
Cole	Frederick	Carl	0.13	$ 10,000
Frederick	Stanyan	Cole	0.32	25,000
Grant	O'Farrell	Geary	0.13	11,000
O'Farrell	Grant	Divisadero	3.84	333,000
(Grant to Jones replacing cable)				
Precita	Folsom	Army	1.00	81,000
Twenty-fourth	Mission	Howard	0.24	19,000
Twenty-sixth	Valencia	Mission	0.24	19,000
California	Van Ness	Presidio	2.73	295,000
(Replacing cable track and rearranging cable)				
Church	Market	Sixteenth	0.40	36,000
(Moving outer tracks to center of street)				
Market	Valencia	Castro	2.00	178,000
(Moving outer tracks to center of street)				
New Track Special Work			....	675,000
Total			11.03	$1,682,000

Cole Street from Frederick to Carl and Frederick Street from Stanyan to Cole

This new trackage is necessary in order to connect the tracks on the south side of Golden Gate Park, running along Frederick Street and Lincoln Way, with the west portal of the Sunset Tunnel, as discussed under the title "Utilization of Tunnels."

Grant Avenue from O'Farrell to Geary

This connection, which has been recommended for the past eight years as being necessary to insure the service on Geary Street and to provide a turnback in the downtown area, was fully discussed in the report on the California Street Cable Railroad.

With this connection and the track on O'Farrell Street provision will be made for looping the service on Geary Street when Market Street is closed off on account of parades or fires. It will also make it possible to operate via O'Farrell Street at the time the Geary Street Line has to be reconstructed. Also with this connection the stoppage of Geary Street at any point between Divisadero Street and Grant Avenue will not tie up service, as cars may be operated over O'Farrell Street from either Divisadero Street or Van Ness Avenue.

O'Farrell Street from Grant Avenue to Divisadero

The use of this track as far as Van Ness Avenue was fully covered in the report on the California Street Cable Railroad, and under the proposed rerouting the use of O'Farrell Street has been extended to Divisadero, as has already been described under rerouting.

Precita Avenue from Folsom to Army

Construction of a second track on Precita Avenue allows double-track operation over this route rather than single track over Army and single track over Precita as at present. This permits the abandonment of the tracks on Army Street between these same limits.

Twenty-fourth Street from Mission to Howard

This new construction is necessary in order to accommodate the proposed rerouting of the No. 24 Line. The abandonment of the trackage on Howard Street necessitates a new connection between Mission Street and the tracks on Twenty-fourth Street east of Howard which was originally provided over Twenty-second Street and Howard Street.

Twenty-sixth Street from Valencia to Mission

The rerouting of the present No. 24 Line over Twenty-sixth Street requires the connection of Valencia Street with Mission Street, thus permitting the utilization of the tracks on Twenty-sixth Street east from Mission directly off Valencia.

California Street from Van Ness to Presidio

This new double-track will replace the cable construction and permit of direct operation from the Richmond District via California Street, as has been very fully discussed in the report on the California Street Cable Railroad.

Church Street from Market to Sixteenth

The work contemplated is the removal of the inner tracks and the shifting of the outer tracks to the center of the street, as four tracks are not necessary.

Market Street from Valencia to Castro

The four tracks are not required on Market Street west of Valencia, and it is contemplated to remove the center tracks and shift the outer tracks to the middle of the street.

The total cost of this work is $1,682,000 and involves the construction of 11.03 miles of single track. This additional cost is more than offset by the reproduction cost new of tracks which may be abandoned on account of the proposed reroutings and which tracks will no longer be required, as shown in Table XXXII. The reasons for the abandonment of each piece has been fully covered in the description of the reroutings.

TABLE XXXII.

TRACKS TO BE ABANDONED ON ACCOUNT OF REROUTING.

Market Street Railway Co.	Miles S. T.	Repr. Cost	Repr. Cost Less Depr.
Army Street, Folsom to Bryant	.255	$ 19,870	$ 10,310
Bosworth Street, Mission to Burnside	.753	53,999	19,159
Brannan Street, Sixth to Eighth	.344	30,780	22,024
Church Street, Market to Sixteenth (inner tracks)	.377	25,237	13,450
Eddy Street, Market to Divisadero	1.758	140,054	49,085
Eighth Street, Bryant to Brannan	.088	9,421	7,040
Ellis Street, Market to Divisadero	2.307	195,319	110,248
Harrison Street, Third to Ninth	1.065	88,743	65,580
Howard Street, Steuart to Twenty-sixth	6.884	569,280	338,364
Hyde Street, O'Farrell to Ellis	.062	5,516	3,457
Market Street, Valencia to Castro	1.911	156,797	78,992
Mason Street, Turk to Eddy	.060	5,782	3,183
Pacific Avenue, Polk to Divisadero	2.282	312,796	33,499
Polk Street, Market to Hayes	.179	13,117	7,372
Tenth Street, Market to Bryant	1.128	94,644	62,463
Twenty-second Street, Mission to Howard	.209	20,182	10,033
Total Market Street Railway Co.	**19.662**	**$1,741,537**	**$ 834,259**
Municipal Railway			
Columbus Avenue, Broadway to Washington	.49	$ 40,000	$ 21,000
Washington Street, Montgomery to Embarcadero	.46	37,000	24,000
Jackson Street, Columbus to Embarcadero	.46	37,000	23,000
Total Municipal Railway	**1.41**	**$ 114,000**	**$ 68,000**
California Street Cable R. R. Co.			
California Street, Presidio to Van Ness	2.798	$ 334,051	$ 116,812
O'Farrell Street, Grant to Jones	.858	111,534	45,048
Total California St. Cable R. R. Co.	**3.656**	**$ 445,585**	**$ 161,860**
GRAND TOTAL	**24.728**	**$2,301,122**	**$1,064,119**

CHAPTER IX.

VALUATION

Under Section 2 of Ordinance No. 8125, under which authority this report is being prepared, the City Engineer and the City Attorney jointly were authorized and empowered to make a valuation of the Market Street Railway Company's property as a whole and as to such parts thereof as the City Engineer reports are necessary or desirable for acquisition by the City.

The values as a separate report are the "Reproduction Cost New" and the "Reproduction Cost Less Accrued Depreciation." Appraisals were to be made for the entire property and for those parts which would be used and useful if acquired by the City for operation in conjunction with the Municipal Railway.

June 30, 1928 was selected as being the most logical date for the appraisal as it was the end of the fiscal year and close to the date of commencing the work. The appraisal covers the following:

All of the property of the Market Street Railway and controlled companies in San Francisco excepting certain records and law library.

That portion of the property operated by the California Street Cable Railroad Company on California Street between Kearny and Davis Street in which the Market Street Railway Company claims an interest.

All of the property on California Street between Davis and Market Streets operated by the California Street Cable Railroad Company in which the Market Street Railway Company claims sole ownership.

Those portions of the trackage jointly operated by the Market Street and Municipal Railways which belong to the former.

All of the property of the Market Street Railway and controlled companies in San Mateo County.

There have not been included, however, any values for so-called intangible assets such as good will, going concern, etc. There has been included a very small value for unexpired franchises which represents the estimated actual cost of securing franchises. Except where data as to the actual cost was available, one hundred dollars has been fixed as the cost per franchise. The appraisal has been sub-divided into the accounts prescribed by the Interstate Commerce Commission and adopted by the Railroad Commission of the State of California.

The inventory was taken in part from previous inventories and partly from actual field inspection. To the quantities there have been applied unit costs representing the average value of the materials and labor as of June 30, 1928, including allowances for construction loss, waste, and contingencies. To the resulting totals shown in the column "Reproduction Cost New" have been added certain percentages to cover engineering, legal expense, injuries and damages, tax, miscellaneous, and interest during construction. The percentages applied are in accordance with recognized good practice.

Careful field studies were made to determine, as far as possible, the present value of the property which is shown in the column "Reproduction Cost Less Depreciation." From the result of these studies, and, with due consideration being given to the matter of inadequacy and obsolescence, a percentage was arrived at as representing the ratio that the property, as of June 30, 1928, bears to new plant of the same type and kind. These ratios are shown under the column headed "Condition Per Cent."

It is necessary for such an organization as the Market Street Railway Company to carry on hand certain supplies and materials for the proper operation, maintenance, and replacement of its railway. While no detailed inventory of this material was made, on the basis of the Company's records it has been estimated to have a value of $800,000.

Folowing the fire in 1906 all of the cable-operated lines which could be replaced by electric service were reconstructed for use with overhead trolley. In the twenty-three years that have elapsed, only a few of the heavily loaded electric lines which were built between 1906 and 1916 have been replaced.

The tracks built during the decade following the fire represent approximately two-thirds of the tangent track in the system, so that the portion of the track built during this period, which has not been rebuilt, now represents a considerable portion of the whole. This track has already served more than half of its expected life, resulting in the physical condition of the system as a whole being low.

Due no doubt to the early expiration of the franchises covering a considerable portion of the Company's tracks, there has been allowed to accumulate deferred maintenance which has been estimated at $400,000 for the track and $150,000 for the track special work, making a total of $550,000 which must be spent over and above normal maintenance within the next year to bring the trackage to efficient standards.

This and the heavy expenditures which will have to be made for the rebuilding of the tracks constructed in the ten years between 1906 and 1916, which have not already been replaced, will call for a great deal more than ordinary maintenance expenditures during the next ten or fifteen years.

Full recognition should be given to these facts when considering the purchase of the Market Street Railway Company's property. No one is to blame for the fact that the natural life of a large portion of the track will expire within the next few years, and the Company's officers should not be censured for deferring maintenance to the extent that they have, pending a definite settlement of its future status. This is particularly true in view of the present trend of the street railway business, as operating costs have been steadily rising and revenues decreasing.

For valuation purposes the system has been divided by streets in such a manner as to readily permit segregating the value by franchises, which in turn permits of showing by years the value of the track and roadway for which the franchises expire. There are sections of the track for which there are no franchises, and sections covered by revocable permits.

The detailed appraisal comprises seven volumes, and in this report no attempt will be made to do more than reproduce as Table XXXIII the summary covering the entire system, which shows the reproduction cost new to be $45,859,006 and that the property is in sixty-two per cent condition, resulting in the reproduction cost new less depreciation as being $28,602,831. To these figures must be added the value of stores and supplies on hand which are estimated at the present time as being worth $800,000. These values are for the entire property and from them deductions must be made for property not desired for purchase, for the City's equity in the Ocean Avenue Line, amounting to $33,500, and for other reasons which have been covered under various topics in the text of this report, some of which are contingent upon the adoption of the rerouting plan. These deductions are:

Item	Repr. Cost	Rep. Cost Less Dep.
Tracks, 19.66 Miles	$1,741,537	$ 834,259
Cars and Equipment	358,845	188,807
	$2,100,382	$1,023,066
Overheads 17%	357,065	173,921
	$2,457,447	$1,196,987
Land	175,000	175,000
Total	**$2,632,447**	**$1,371,987**

TABLE XXXIII.

VALUATION OF THE PROPERTIES OF THE MARKET STREET RAILWAY AS OF JUNE 30, 1928—ENTIRE SYSTEM, FINAL SUMMARY.

		Repr. Cost	Cond. %	Repr. Cost Less Dep.
501	Engineering	$ 1,254,670	59	$ 739,660
502	Right of Way	426,955	100	426,955
503	Other Land	2,752,998	100	2,752,998
504	Grading	2,481,071	100	2,476,714
505	Ballast	1,212,333	61	738,502
506	Ties	733,577	47	342,631
507	Rails and Fastenings	2,894,882	54	1,576,647
508	Special Work	1,630,953	41	666,954
509	Underground Construction	1,208,656	40	484,789
510	Track and Roadway Labor	2,286,972	52	1,199,655
511	Paving	4,439,959	42	1,874,826
512	Roadway Machinery and Tools	97,800	45	44,379
515	Bridges	59,127	79	46,917
516	Crossings, Fences, Signs	78,691	74	58,434
517	Signals	16,749	80	13,325
518	Telephone Lines	165	80	132
519	Poles and Fixtures	1,092,569	76	827,263
520	Underground Conduits	179,105	80	143,284
521	Distribution System	1,579,678	80	1,270,673
523	Shops and Car Houses	1,671,293	63	1,053,670
524	Stations and Miscellaneous Buildings	231,502	50	115,886
530	Cars	9,369,080	63	5,941,694
532	Service Equipment	411,625	59	244,090
533	Electric Equipment of Cars	3,820,706	56	2,125,101
536	Shop Equipment	573,720	41	233,503
537	Furniture	129,770	68	88,081
538	Miscellaneous Equipment	85,733	53	45,220
540	Substation Buildings	318,144	80	254,652
542	Power Plant Equipment	251,613	38	94,539
543	Substation Equipment	511,863	61	313,608
544	Transmission System	44,492	87	38,523
545	Franchises	19,931	20	3,950
546	Law Expenditures	237,247	59	139,576
547	Interest	2,404,658	59	1,423,899
548	Injuries and Damages	249,794	59	146,972
549	Taxes	118,623	59	69,788
550	Miscellaneous	982,302	60	585,341
	Total Accounts Nos. 501 to 550	**$45,859,006**	**62**	**$28,602,831**
	Less City's Equity in Ocean Avenue Line as of June 30, 1928	33,500	100	33,500
		$45,825,506		$28,569,331
	Materials and Supplies (estimated)	800,000		800,000
	GRAND TOTAL	**$46,625,506**	**63**	**$29,369,331**

Deducting these totals from the cost of the entire property leaves the following as the valuation of all of the property which might be used by the City or be useful to it.

Reproduction Cost New.....$43,993,057

Reproduction Cost New Less Depreciation..... 27,997,344

In the case of purchase, the following adjustments should be made as of the date of sale:

The City's equity in the Ocean Avenue Line should be revised.

Additions and betterments, or retirements, since June 30, 1928, should be applied.

Materials and supplies on hand should be appraised.

Adjustments, on account of any changes made in the amount of property which the City requires, should be either added or deducted.

Adjustments should be made for property covered by franchises or permits which provide for its acquisition by the City. Such franchises cover the lines on Army Street from Potrero Avenue to Third Street, Gough Street, Judah Street, Ninth Avenue, Nineteenth Avenue, Taraval Street, Thirty-fifth Avenue, Thirty-third Avenue from Taraval Street to Vicente Street, Twentieth Avenue, Wawona Street, and portions of Junipero Serra and Sloat Boulevards.

In Table XXXIV the total of the track and roadway accounts has been subdivided on the basis of track whose franchises have expired and those whose franchises will expire during each year from 1929 to 1947, for San Francisco

TABLE XXXIV.

TRACK AND ROADWAY.

VALUATION BY DATES OF FRANCHISE EXPIRATIONS.

SAN FRANCISCO COUNTY.

Year of Franchise Expiration	Miles Single Track	Repr. Cost	Cond. %	Repr. Cost Less Dep.
No Franchise	5.531	$ 497,537	59	$ 295,896
Revocable Permit	2.594	225,503	73	164,063
1929	105.008	9,126,949	58	5,335,847
1930	9,528	951,932	43	408,437
1931	12,755	1,347,503	47	630,960
1932	4.027	259,475	50	128,989
1933	4.286	272,851	66	179,005
1935	.966	90,213	50	45,473
1936	13.522	1,112,610	59	655,324
1940	38.733	3,201,550	58	1,842,939
1941	13.546	1,084,765	64	692,652
1942	15.577	1,478,768	57	849,540
1944	9.548	787,206	55	434,230
1947	.522	46,388	57	26,412
Private Right of Way	22.759	798,738	55	440,885
Total San Francisco County	**258.902**	**$21,281,988**	**57**	**$12,130,652**

TABLE XXXIV., (Continued)

SAN MATEO COUNTY.

Year of Franchise Expiration	Miles Single Track	Repr. Cost	Cond. %	Repr. Cost Less Dep.
1952	10.642	$ 702,913	77	$ 541,422
1958	1.015	53,160	41	21,736
1963	2.997	171,412	65	111,567
1965	.488	27,988	65	18,225
Private Right of Way	17.813	1,146,322	79	900,275
Total San Mateo County	**32.955**	**$ 2,101,795**	**76**	**$ 1,593,225**
Grand Total	**291.857**	**$23,383,783**	**59**	**$13,723,877**

County, and from 1952 to 1965 for San Mateo County. The value of track on private rights of way is also shown.

Security Values

For the purpose of developing data as to what the investing public think the property is worth, there is appended Table XXXV, showing the value of the Market Street Railway Company's securities, based upon high and low market values from the year 1922 to 1928 inclusive and for the first three months of the year 1929. The same data graphically plotted shows the spread by years.

TABLE XXXV.

VALUE OF MARKET STREET RAILWAY COMPANY'S SECURITIES.
Based Upon High and Low Market Quotations.

SUMMARY.

Year	Par Value Outstanding Jan. 1	High Value	Low Value
1922	$46,563,900	$27,724,641	$17,875,425
1923	45,810,000	28,479,849	23,241,115
1924	44,926,450*	26,338,714	19,146,473
1925	44,801,450	25,965,660	20,023,618
1926	44,255,450	22,378,245	18,126,622
1927	43,621,450	21,556,857	18,022,809
1928	42,927,950	20,660,977	16,489,218
1929—First 3 Months	42,292,450	16,273,496	13,206,769

*In 1924 5% bonds and 6% notes were refunded with 7% bonds. The value of the 7% bonds are used in the 1924 figures.

Capital Stock	1929 (3 mos.)				
Common	10,647,400	4 3-8	465,824	3	319,422
2nd pfd. n. c.	4,673,700	7 1-2	350,528	6 3-4	315,475
Cum. pfd.	4,986,850	15	748,028	13	648,291
Prior pref.	11,618,500	39 1-2	4,589,308	31 1-4	3,630,781
Total Stocks	**31,926,450**		**6,153,688**		**4,913,969**
Funded Debt					
1st Mtge. 7's	10,366,000	97 5-8	10,119,808	80	8,292,800
Total	**42,292,450**		**16,273,496**		**13,206,769**

TABLE XXXV (Continued).

DETAILS.

Security	Outstanding Par Value Jan. 1 Dollars	High Price Dollars	High Amount Dollars	Low Price Dollars	Low Amount Dollars
Capital Stock	**1928**				
Common	Same As	7 1-2	798,555	3 1-8	332,731
2nd pfd. n. c.	1929	16 1-8	753,634	8	373,896
Cum. pfd.		29 1-2	1,471,121	15	748,028
Prior pref.		54 3-4	6,361,129	38 1-2	4,473,123
Total Stocks	**31,926,450**		**9,384,439**		**5,927,778**
Funded Debt					
1st Mtge. 7's	11,001,500	102 1-2	11,276,538	96	10,561,440
Total	**42,927,950**		**20,660,977**		**16,489,218**
Capital Stock	**1927**				
Common	Same As	6 7-8	732,009	4 3-8	465,824
2nd pfd. n. c.	1929	17 1-2	817,898	11 1-2	537,476
Cum. pfd.		25 1-8	1,252,946	18	897,633
Priof pref.			6,942,054	41 5-8	4,836,201
Total Stocks	**31,926,450**		**9,744,907**		**6,737,134**
Funded Debt					
1st Mtge. 7's	11,695,000	101	11,811,950	96 1-2	11,285,675
Total	**43,621,450**		**21,556,857**		**18,022,809**
Capital Stock	**1926**				
Common	Same As	10	1,064,740	4 1-8	439,205
2nd pfd. n. c.	1929	22 1-2	1,051,583	11 3-4	549,160
Cum. pfd.		40	1,994,740	19 1-2	972,436
Prior pref.		51 3-8	5,969,004	39 1-8	4,545,738
Total Stocks	**31,926,450**		**10,080,067**		**6,506,539**
Funded Debt					
1st Mtge. 7's	12,329,000	99 3-4	12,298,178	94 1-4	11,620,083
Total	**44,255,450**		**22,378,245**		**18,126,622**

All stocks have $100 par value. All classes have equal voting rights.

Capital Stock	**1925**				
Common	Same As	12	1,277,688	6	638,844
2nd pfd. n. c.	1929	35	1,635,795	15	701,055
Cum. pfd.		46 1-4	2,306,418	24 1-2	1,221,778
Prior pref.		65 1-4	7,581,071	42 1-4	4,908,816
Total Stocks	**31,926,450**		**12,800,972**		**7,470,493**
Funded Debt					
1st Mtge. 7's	12,875,000	102 1-4	13,164,688	97 1-2	12,553,125
Total	**44,801,450**		**25,965,660**		**20,023,618**
Capital Stock	**1924**				
Common	Same As	13 1-2	1,437,399	6 3-4	718,700
2nd pfd. n. c.	1929	30	1,402,110	14	654,318
Cum. pfd.		42	2,094,477	20	997,370
Prior pref.		71 1-2	8,307,228	41	4,763,585
Total Stocks	**31,926,450**		**13,241,214**		**7,133,973**

TABLE XXXV (Continued).
DETAILS.

Security	Outstanding Par Value Jan. 1 Dollars	High Price Dollars	High Amount Dollars	Low Price Dollars	Low Amount Dollars
Funded Debt					
1st Mtge. 7's	13,000,000	100 3-4	13,097.500	94 5-8	12,012,500
Total	**44,926,450**		**26,338,714**		**19,146,473**
Capital Stock	**1923**				
Common	Same As	16 1-2	1,756,821	7 3-4	825,174
2nd pfd. n. c.	1929	45	2,103,165	22	1,028,214
Cum. pfd.		39	1,944,872	28	1,396,318
Prior pref.		80	9,294,800	64	7,435,840
Total Stocks	**31,926,450**		**15,099,658**		**10,685,546**
Funded Debt					
Cons. Mtge. 5's	9,560,100	95 1-2	9,129,896	89 1-4	8,532,389
Col. notes, 6's	4,326,000	98 1-4	4,250,295	93	4,023,180
Total	**45,812,550**		**28,479,849**		**23,241,115**
Capital Stock	**1922**				
Common	10,646,800	11	1,171,148	3	319,404
2nd pfd. n. c.	4,673,400	32	1,495,488	5 5-8	262,879
Cum pfd.	4,986,700	50 1-4	2,505,817	17	847,739
Prior pref.	11,617,000	76	8,828,920	35	4,065,950
Total Stocks	**31,923,900**		**14,001,373**		**5,495,972**
Funded Debt					
Cons. Mtge. 5's	9,793,000	92	9,009,560	81	7,932,330
Col. notes, 6's	4,847,000	97 1-4	4,713,708	91 3-4	4,447,123
Total	**46,563,900**		**27,724,641**		**17,875,425**

In the first column of the table is shown the par value of the securities outstanding as of January first of each year. In the second column is shown the aggregate value of the securities taken at their highest market price during the year. The third column shows the aggregate value of the securities taken at their lowest market value during the year.

In 1924 outstanding five per cent and six per cent notes were refunded with seven per cent bonds as already set forth in detail. The par value of these bonds is used in making the 1924 figure rather than the other securities which were outstanding at the first of the year. The lowest market value during the period covered was $13,206,769 during the first three months of 1929, while the highest was $28,479,849 in 1923. These figures have no real significance as to the physical value of the property, but they do illustrate what the investing public believe the securities are worth. Security prices vary with the fluctuating level of the New York Market for stocks and bonds.

It has already been shown that a very large block of these securities is held by a relatively small number of people or corporations.

Comparisons of Valuations

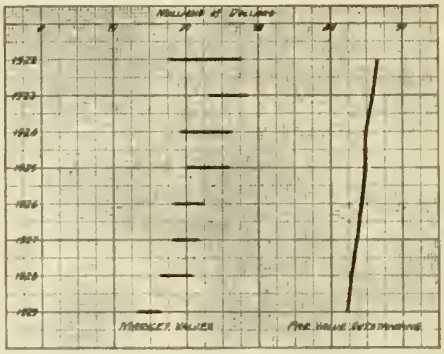
The values found at the different dates and by the different organizations are presented below for the purpose of comparison. They are not all exactly comparable but approximately so.

California Railroad Commission historical valuation, as of June 30, 1920, using historical topographical conditions and unit prices as of the time of installation:

Reproduction Cost New	$29,715,147
Condition Per Cent	80
Reproduction Cost Less Depreciation	23,888,990

California Railroad Commission reproduction cost new, as of June 30, 1920, based on average unit costs of the three years ending June 30, 1920:

Reproduction Cost New	$50,495,651
Condition Per Cent	79
Reproduction Cost Less Depreciation	39,481,815



MARKET STREET RAILWAY
Par Value of Outstanding Securities and Range of Market Values by Years.

Both of these are the revised figures of the Engineering Department of the California Railroad Commission submitted on February 15, 1921, and do not include stores on hand which amount to $924,075 on the historical basis and $1,533,709 on the reproduction new basis.

The valuation which I prepared as of June 30, 1921, using the prices as of 1913 to 1917 inclusive, not including stores, was as follows:

Reproduction Cost New	$35,355,942
Condition Per Cent	75
Reproduction Cost Less Depreciation	26,448,866

The valuation made by the Byllesby organization, after acquiring control of the Company, was $58,052,139 not including stores as of June 30, 1926. No determination of depreciation was made with this appraisal.

Table XXXVI puts this data in form which is more readily grasped.

TABLE XXXVI.

TABULATION OF APPRAISALS—MARKET STREET RAILWAY.

Appraisal	Date	Rep. Cost New	Cond. %	Rep. Cost Less Dep.
C. R. C. Historical	6/30/20	$29,715,147	80	$23,888,990
C. R. C. Reproduction	6/30/20	50,495,651	79	39,481,815
City Engr. 1913-17 Prices	6/30/21	35,355,942	75	26,448,866
Byllesby Reproduction	6/30/26	58,052,139	..	.....
City Engr. Reproduction	6/30/28	45,859,006	62	28,602,831
1928 Market Value of Securities, High				20,660,977
Low				16,489,218
1929 Market Value of Securities, High				16,273,496
Low				13,206,769

The figures presented in this table have been made up at different times, under different conditions, and by different organizations. The values of the securities are not based on the property value, but on their market value.

No one of these figures, as it stands in the table or as it might be adjusted, on account of changes in the amount of property to be taken, establishes a price which the City should pay for the property.

This price is to be reached through negotiations between the officials of the City and the officers of the Company as authorized by the ordinance. In these negotiations, however, the figures presented will be of value in reaching the purchase price.

Only one other large private company in the United States has been acquired by the local municipality, and it may not be out of place to indicate here what occurred in Detroit when the City purchased the urban properties of the Detroit United Railroads in 1922. This system had a mileage of 273 miles, ninety per cent of which was paved, and operated 1096 cars. The real estate had a valuation of approximately $8,000,000. Steam power plants furnishing fifty per cent of the total current supply were included in the purchase.

The price fixed was $19,850,000. The City issued $4,000,000 in bonds, and from the proceeds made a down payment of $2,770,000 and purchased the current stock of supplies. After this, semi-annual payments of $500,000 were to be made on the property with interest at six per cent.

The Company operates interurban lines out of Detroit. By agreement with the City and at mileage rates to be fixed by a board of arbitration, the Company is permitted to operate its interurban lines into the City. This privilege may be cancelled by giving two years' notice.

In addition to purchasing the property of the Detroit United Railroads, the City made needed extensions and rehabilitated the property which was taken over. At the present time the fare in Detroit is six cents with an extra cent charged for transfers.

CHAPTER X.
DEPRECIATION AND REPLACEMENTS

A study of the valuation was made to determine the amount of depreciation that should be set up to meet the needs of the system on the straight line basis. Table XXXVII shows the depreciation necessary for the electric lines and cable lines as well as for the total.

For each of the two classes of construction there are shown the valuation by accounts, the total depreciable property, the per cent annual depreciation, and the yearly depreciation in dollars. These amounts for the electric lines and the cable lines have been added together showing the yearly depreciation for the total system. This amounts to $1,389,305, or in round figures $1,400,000.

The Municipal Railway depreciation by ordinance has been figured on the basis of three per cent of the original cost of the property.

In the case of the Market Street Company this would amount to $1,375,770, which amount very closely approximates that which has been calculated as shown in the table. This figure is used in the estimates of the cost of operation by the City as meeting present ordinance requirements.

That $1,400,000 is not out of line is demonstrated by the fact that two companies in the State are setting up depreciation reserves calculated from the lives established by the California Railroad Commission in rate cases as follows:

Los Angeles Railway	$1,579,954
Key System	743,791

These figures very closely check the $1,400,000 on the basis of their valuations.

In the case of the Market Street Railway Company, $1,400,000 is approximately 3.8 per cent of the value of the depreciable property. For the Key System the Railroad Commission estimated 4.3 per cent of the value of the depreciable property, and in the case of the Los Angeles Railway, using the lives that the Commission established, the annual rate amounted to approximately 5 per cent.

The Market Street Railway in its 1928 report has set up, from profit and loss, depreciation to the extent of $500,000. This is clearly inadequate to make necessary replacements.

It has already been shown that deferred maintenance has accrued to the extent of $550,000 on the Market Street property and that very large sums must be expended over the next fifteen years. The Company has no funds on hand with which to make these replacements, as its depreciation reserve is invested in the property, and it is faced with the necessity of securing new money if it is going to rehabilitate its lines.

The condition of the two properties, as visible to the average layman, shows the necessity for fairly large expenditures on the private lines. Certain sections of the municipal system are also due for early replacements, but funds to care for such work as will have to be done within the next two or three years, are being accumulated.

The 3 per cent rate established for setting up the depreciation reserve is ample to care for track replacements, but we should not lose sight of the fact that the time for replacements of equipment and other facilities is also approaching. It is to be regretted that the municipal revenues during the past two years have not been sufficient to permit of setting up the full authorized depreciation. The amount that has been set up will not be sufficient to meet the actual needs for rehabilitation during the next five years. These shortages in depreciation should,

TABLE XXXVII

MARKET STREET RAILWAY COMPANY

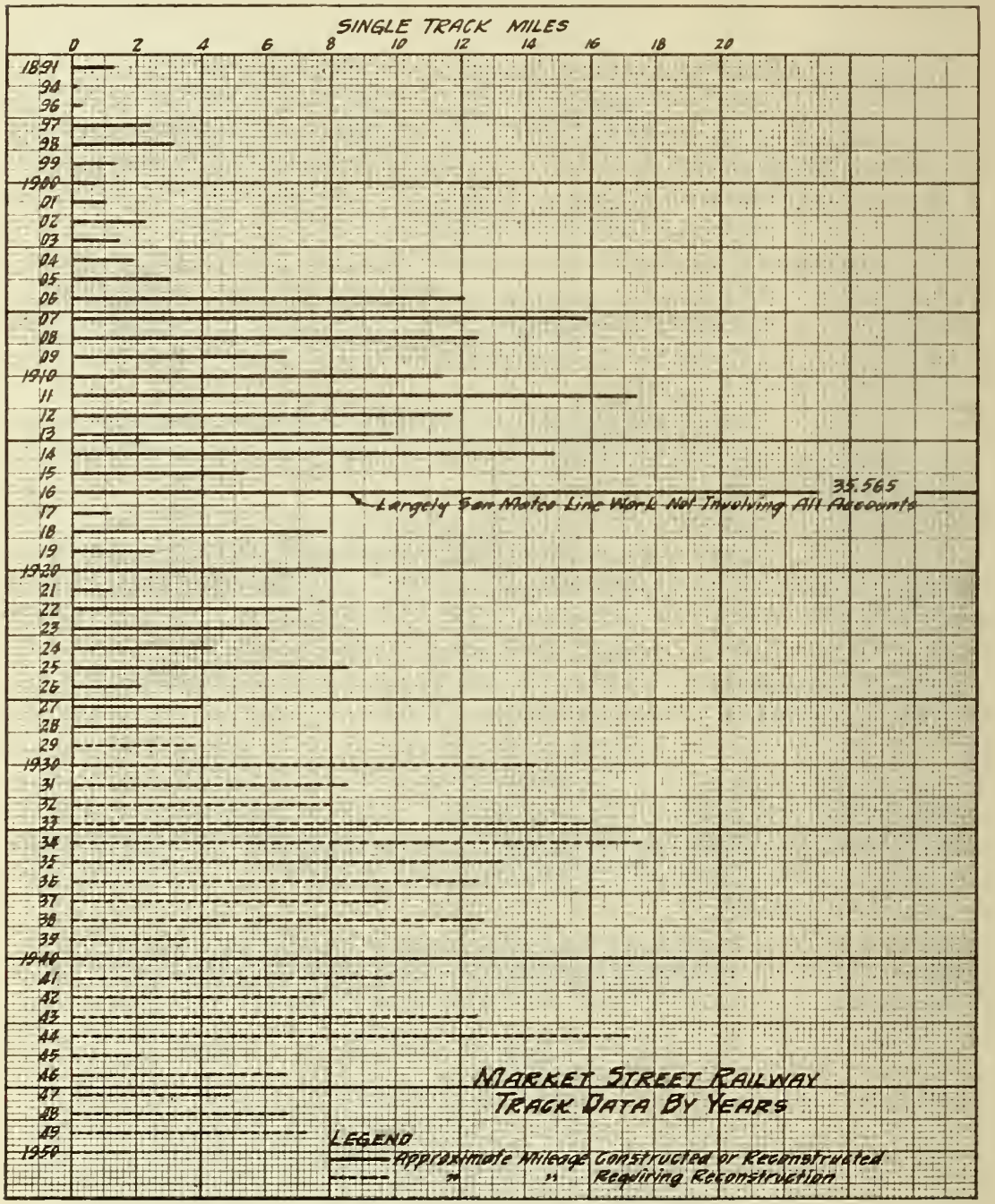
ESTIMATE OF DEPRECIATION ON STRAIGHT LINE BASIS

Total Syetem Property as of June 30, 1928

		Electric Lines					Cable Lines					Yearly Depreciation for Total Syetem
		Valuation	Depreciable Property	Life In Yeare	Perecnt	Yearly Depreciation	Valuation	Depreciable Property	Life In Yeare	Perecnt	Yearly Depreciation	
501	Engineering	$ 1140654	$ 947870	-	-	$ 41309	$ 114016	$ 111342	-	-	$ 2519	$ 43828
502	Right of Way	426955	-	-	-	-	-	-	-	-	-	-
503	Other Land	2638734	-	-	-	-	110664	-	-	-	-	-
504	Grading	2479590	150000	40	2.5	3750	1481	-	-	-	-	3750
505	Ballast	1211290	1029596	23	4.343	44715	1043	887	23	4.343	39	44754
506	Tiee	732992	711002	23	4.343	30879	585	567	23	4.343	25	30904
507	Rails & Fasteninge	2806746	2385734	26	3.846	91755	88136	74916	40	2.5	1873	93628
508	Special Work	1542933	1419498	16	6.25	88719	88020	80978	16	6.25	5061	93780
509	Underground Const.	151758	151758	50	2.	3035	1056898	1056898	67	1.492	15769	18804
510	Track & Roadway Labor	2108273	2108273	26	3.846	81084	178699	178699	40	2.5	4467	85551
511	Paving	4224922	4224922	23	4.343	183488	215037	215037	40	2.5	5376	188864
512	Roadway Machy.& Tools	97800	92910	8	12.5	11614	-	-	-	-	-	11614
515	Bridges	59127	59127	40	2.5	1478	-	-	-	-	-	1478
516	Crossings,Fences,Signe	78687	78687	26	3.846	3026	4	4	26	3.846	-	3026
517	Signal Apparatus	11992	11752	26	3.846	452	4757	4662	26	3.846	179	631
518	Telephone Lines	165	165	12	8.333	14	-	-	-	-	-	14
519	Poles & Fixtures	1090892	1036347	30	3.333	34541	1677	1593	30	3.333	53	34594
520	Underground Conduit	179105	179105	50	2.	3582	-	-	-	-	-	3582
521	Distribution Syetem	1579151	1184363	10	10.	118436	527	395	10	10.	40	118476
523	Shops & Carhouses	1324539	1258312	40	2.5	31458	346754	329416	40	2.5	8235	39693
524	Stations & Misc.Bldgs.	231407	219837	30	3.333	7327	95	90	30	3.333	3	7330
530	Passenger & Comb.Cars	9086965	8178268	35	2.857	233653	282115	253903	45	2.222	5642	239295
532	Service Equipment	411625	391044	25	4.	15642	-	-	-	-	-	15642
533	Electric Equip.of Cars	3820706	3438635	33	3.03	104191	-	-	-	-	-	104191
536	Shop Equipment	559488	520324	26	3.846	20012	14232	13236	26	3.846	509	20521
537	Furniture	126698	124164	20	5.	6208	3072	3011	20	5.	151	6359
538	Misc. Equipment	85733	81446	7	14.286	11635	-	-	-	-	-	11635
540	Substation Equipment	318144	302237	40	2.5	7556	-	-	-	-	-	7556
542	Power Plant Equipment	525	504	30	3.333	17	251088	241044	30	3.333	8034	8051
543	Substation Equipment	511863	470914	30	3.333	15696	-	-	-	-	-	15696
544	Transmission System	44492	28920	35	2.857	826	-	-	-	-	-	826
545	Franchises	19231	19231	40	2.5	481	700	700	40	2.5	18	499
546	Law Expenditures	214726	177485	-	-	7897	22521	22014	-	-	498	8395
547	Interest during Constr.	2209301	1858947	-	-	77106	196357	190258	-	-	4302	81408
548	Injuries & Damages	226132	186963	-	-	8310	23661	23128	-	-	523	8833
549	Taxes	107363	88742	-	-	3948	11261	11007	-	-	249	4197
550	Miscellaneous	914643	781453	-	-	30418	67659	65588	-	-	1482	31900
	TOTALS	$42775347	$33898535		3.9	$1324258	$3080059	$2879373		2.3	$65047	$1389305 (3.8%)

by any means possible, be made up at an early date. In other words, depreciation requirements if not met out of one year's revenue should be taken from the next.

Under section entitled "Track and Roadway Replacements," it is shown that the expense for replacing tracks during the next fifteen years would average $735,000 per year. The depreciation on track and roadway accounts only, in Table XXXVII, amounts to $560,000 a year.



The financial situation confronting the Market Street Company, on account of the necessity of rehabilitating the tracks, has been brought about through the Company's failure to set aside annually, throughout the life of the property, the

funds with which to replace the property when worn out. This same situation will have to be met by the Municipal Railway's present system and by the City's combined system should it take over the property and fail each year to make proper provision for the day when it will have to replace the major parts of the property.

The Market Street Company is not entirely to blame for the predicament in which it now finds itself, as the revenue for several years past has not been sufficient to permit it to set aside a proper depreciation reserve. This same condition is now being experienced by the Municipal Railway, and steps should be taken to make it possible to set aside the proper amount each year.

Track and Roadway Replacements

In estimating future operating expenses, the condition of the tracks and distribution system, as well as the future renewals of the same, are of great importance.

As stated before in this report, the Company has passed through a very favorable period for the past twelve years, during which time the expenditures for track and roadway renewals have been very low and considerably under the average.

This period of favorable conditions has now drawn to a close, and the fifteen year period from 1930 to 1944 inclusive will, of necessity, be years of heavy renewals. These replacements should average twelve miles of track per year, and while some years will require less than this amount, other years will be heavier. The accompanying chart gives this data as closely as it has been possible to estimate the future requirements, also the past construction.

These renewals will affect the operating expenses, the depreciation reserve, and new capital required.

The cost of renewing a mile of single track is estimated at $71,000 which is divided between the cost of removal of the old structure and the cost of the new. The cost of removing the old track is estimated at $9,800 per mile, and the cost of the new track as $61,200. The cost of removing the old track should be credited with the salvage value of the old structure removed, leaving a net charge to the operating accounts of $6,150 per mile of single track.

Based on an average renewal of twelve miles per year, the net average charge to the operating accounts, under the Interstate Commerce Commission accounting rules, would be approximately $73,800 per year in excess of ordinary maintenance charges, and the gross additions and betterments for the new track would approximate $735,000 per year.

If the reproduction cost less depreciation was set up on the Municipal Railway's books in case of purchase, the average value for the tracks affected in this program would amount to about $25,000 per mile; on a basis of twelve miles per year a total of $300,000 would be retired from capital, leaving a net addition and betterment of $435,000 per year. This amount represents the average amount of new money that will be needed annually.

These annual expenditures will vary from perhaps one-half to double the amounts shown above, depending on the policy of the company during the various years. On account of deferred renewals at the present time the average figures at least should be used for the ensuing year.

TABLE XXXVIII

SAN FRANCISCO MUNICIPAL RAILWAY RESULTS OF OPERATION BY LINES.

STREET CAR LINES Fiscal Year 1928			Way and Structures, Equipment, and Power @ .093852 Car Mile	Conducting Transportation Traffic, General, and Miscellaneous @ 2.16568 Car Hour	Total Operating Expense	Receipts	Net Revenue	Depreciation and Accident Reserve @ .033693 Car Mile	Net
Line	Car Miles	Car Hours							
A	745,832	79,362	69,998	171,873	241,871	300,477	58,606	25,129	33,477
B	1,224,785	117,358	114,949	254,160	369,109	498,874	129,765	41,267	88,498
C	988,330	99,537	92,757	215,565	308,322	357,140	48,818	33,300	15,518
D	611,159	71,649	57,358	155,169	212,527	284,348	71,821	20,591	51,230
E	630,411	84,784	59,165	183,615	242,780	231,124	11,656*	21,240	32,896*
F	563,698	66,410	52,904	143,823	196,727	317,392	120,665	18,993	101,672
H	811,794	86,985	76,188	188,382	264,570	234,958	29,612*	27,352	56,964*
J	914,837	100,480	85,859	217,608	303,467	397,116	93,649	30,823	62,826
K	1,459,508	127,854	136,978	276,891	413,869	435,558	21,689	49,175	27,486*
L	773,692	69,346	72,613	150,180	222,793	227,510	4,717	26,067	21,350*
M	187,109	15,927	17,561	34,493	52,054	27,957	24,097*	6,304	30,401*
Total	**8,911,155**	**919,692**	**836,330**	**1,991,759**	**2,828,089**	**3,312,454**	**484,365**	**300,241**	**184,124**
BUS OPERATION			Equipment @ .07267 Car Mile	@ 1.6383 Car Hour				@ .06086 Car Mile	
Park	286,194	27,856	20,800	45,637	66,437	35,669	30,768*	17,416	48,184*
Beach	154,494	14,976	11,228	24,535	35,763	20,781	14,982*	9,403	24,385*
Forest Hill	126,102	15,305	9,164	25,074	34,238	14,461	19,777*	7,675	27,452*
Embarc.	147,328	15,509	10,706	25,408	36,114	38,044	1,930	8,966	7,036*
Marina	32,038	5,905	2,328	9,674	12,002	2,205	9,797*	1,950	11,747*
Total	**746,156**	**79,551**	**54,226**	**130,328**	**184,554**	**111,160**	**73,394***	**45,410**	**118,804***

*Indicates Deficit.

TABLE XXXIX.

SAN FRANCISCO MUNICIPAL RAILWAY.
ALLOCATION OF REVENUE AND EXPENSES YEAR ENDING JUNE 30, 1928.

	Bus Operation				Rail Operation		
	System	Total	Per Car Mile	Per Car Hour	Total	Per Car Mile	Per Car Hour
Passenger Revenue	$3,461,859.03	$109,938.80	$.14734	$1.38199	$3,351,920.23	$.37615	$3.64461
Miscellanous Revenue	15,806.50	1,221.26	.00164	.01535	14,585.24	.00164	.01586
Total Revenue	**$3,477,665.53**	**$111,160.06**	**$.14898**	**$1.39734**	**$3,366,505.47**	**$.37779**	**$3.66047**
Operating Expenses							
Way and Structures	155,267.55	.....	.....	.....	155,267.55	.01742	.16883
Equipment	238,867.29	54,225.77	07267	.68165	184.641.52	.02072	.20076
Power	496,421.16	.....	.....	.....	496,421.16	.05571	.53977
Conducting Transportation	1,911,764.78	106,347.13	.14253	1.33684	1,805,417.65	.20260	1.96307
Traffic	291.00	.....	.....	.....	291.00	.00003	.00032
General and Miscellaneous	210,029.50	23,981.33	.03214	.30146	186,048.17	.02088	.20229
Total	**$3,012,641.28**	**$184,554.23**	**$.24734**	**$2.31995**	**$2,828,087.05**	**$.31736**	**$3.07504**
Depreciation	259,105.20	27,502.66	.03686	.34572	231,602.54	.02599	.25183
Accidents	86,546.56	17,907.71	.02400	.22511	68,638.85	.00770	.07463
Total	**$ 345,651.76**	**$ 45,410.37**	**$.06086**	**$0.57083**	**$ 300,241.39**	**$.03369**	**$0.32646**
Total Operating Expense and Depreciation	**$3,358,293.04**	**$229,964.60**	**$.30820**	**$2.89078**	**$3,128,328.44**	**$.35105**	**$3.40150**

CHAPTER XI.

MUNICIPAL CONDITIONS AFFECTING COST OF OPERATION

There has already been presented as Table XVI the Market Street Railway operating results by lines. In order to give the same information for the municipal lines there is presented herewith Table XXXVIII entitled "San Francisco Municipal Railway Expense of Operation by Lines." This shows that of the trolley lines three fail to produce a net revenue before depreciation and accident reserves. All but one of the bus lines show the same deficit.

After depreciation and accident reserve five of the rail lines and all of the bus lines show a deficit. The rail lines as a whole show a net of $184,124 after deducting operating expenses, depreciation and accident reserves. The automobile buses show a deficit of $118,804. These totals cannot be checked exactly against other tables presented in this report showing results of Municipal Railway operation, as the receipts from school tickets and quartermaster tickets are now allocated by lines. The differences between the totals of this table and the totals shown on Table XLI are approximately $54,000. This discrepancy makes no material difference in the value of the table as the allocation of expense by lines must of necessity be approximate. The method of deriving the costs from which this allocation is made is set up in Table XXXIX, showing the division of costs by car miles and car hours for bus and rail operation. By applying these figures to the car mileage and car hours operated by each line, it was possible to set up the information given in Table XXXIX.

Wage Scales and Working Conditions

There is submitted as Table XL a comparison of wages paid to certain classes of employees by the Municipal Railway and the Market Street Railway which shows the principal reason for the large difference in the cost between Municipal and Company operation in San Francisco.

TABLE XL.

COMPARATIVE WAGE SCALE.

	Municipal Railway	Market Street Railway
Platform Men (per hour)	$0.75	$0.48 to $0.56
Average 3 months 1929		54.624c
Track Men	0.725	0.4589
Car Washers	0.765	0.445
Car Repairers	0.85	0.48 to 0.56
Machinists	1.125	0.67
Blacksmiths	1.125	0.72
Carpenters	1.125	0.67
Painters	1.125	0.67

During the year the aggregate of the Market Street Railway payrolls was $5,303,102, a large portion of which represents the wages of the classes of men shown on this table.

In addition to paying a higher wage scale, other conditions apply to municipal employees which increase the costs. The City employees work eight hours a day on the basis of a six day week for some employees, and on the basis of a five and a half day week for mechanics and other trades who are paid for a forty-eight hour week for forty-four hours work.

Under the charter requirements employees of the Municipal Railway contribute to a Pension Fund, the amound being based on their ages and wages. This money, together with an equal amount contributed by the Railway, is used in retiring aged employees and in providing annuities for those permanently disabled. In case of death, the amount which has been contributed by the employee, with interest, is returned to his heirs, together with six months' wages which are taken from the Railway's contribution to the fund.

After being in the service one year each worker is entitled to twelve working days' annual vacation with pay. These conditions cost an appreciable sum above the difference in wage scale, which will be added to the operating cost of the Market Street lines as compared to their operation under Company ownership.

With the combined systems it is estimated that the pensions alone will cost $350,000 a year. During the year 1928 the Market Street Railway Company paid out in gratuities and pensions $52,869. No information is available as to exactly how this money was expended.

In addition to the $52,869, the Market Street Railway Company, during the year 1928, expended $10,752 for "relief work." As has already been indicated, the Company provides medical and hospital attention for employees. To partly cover the cost of this service, each worker contributes fifty cents per month which sum does not cover the cost of the service supplied by the Company. Similar service is not provided for municipal employees.

The Municipal Railway expenditure for pensions for the year ending June 30, 1928, was $102,046.

POSSIBLE SAVINGS.

Power

The Municipal Railway lines buy power as direct current from the Pacific Gas and Electric Company who own the 11,000 volt transmission lines and the substation equipment. The power is measured at the switchboard, and charges are made on the basis of Schedule P-9 for direct current. Energy is distributed to the Municipal Railway from eight of the Pacific Gas and Electric Company's substations.

The Market Street Railway operates six substations within the city limits and a seventh at Millbrae in San Mateo County. They buy alternating current on the P-9 Schedule from the Pacific Gas and Electric Company.

For the calendar year 1928 the total of the accounts making up the power group for the Municipal Railway shows the following costs:

5.7 cents per car mile.

55.18 cents per car hour.

Similar figures for the Market Street Railway based on electric car, cable car, and automobile bus miles and hours are:

5.15 cents per car mile.

46.47 cents per car hour.

These two sets of figures are not comparable in every way as the Municipal Railway figures cover the cost of direct current power, which includes fixed charges on transmission and conversion facilities. The Market Street Railway figures do not include these as they are carried elsewhere. Included in the Market Street Railway figures are the power used for operating the cable lines and the cost of operating the cable power houses. Fuel and lubricants for the automobile buses are included in the Market Street figures.

After making allowance for these differences, we find that the cost of power per car mile for electric car operation is approximately the same on the municipal

and on the Market Street systems. It should, however, be borne in mind that a large number of the Market Street cars have 25% less motive power, are much smaller and in a different class of service than those of the Municipal Railway.

There is no question that, if it were possible to lay out and construct a complete distribution system for the Market Street Railway, it would be possible to effect a saving of between five and ten per cent in the annual cost of power. This, however, would involve the initial expenditure of large sums of money, as it would require additional substations, the readjustment of the entire feeder system, and considerable new substation equipment. Without making a revision of the whole system it seems impossible to secure savings of any magnitude.

It is possible to supply power to certain sections of the road from the substations now feeding the Municipal Railway. The portions of the system so supplied will not be a very large proportion of the whole, and, consequently the savings will not be great, although some slight improvements in service might result through bettering voltage conditions. In one or two cases Municipal lines may be similarly benefited by securing power from Market Street Railway Stations.

When power can be purchased at the substation for an average figure of eight mills per kilowatt hour, the savings in energy have to be relatively large in order to warrant any very great capital expenditures.

Paving

The subject of pavement has been briefly discussed in an earlier section where it was shown that the pavement is of no benefit to the railway; in fact it is a detriment. It seems, therefore, reasonable and just that the railways be relieved of the annual expense to which they are put in order to maintain the street surface. During the year 1928, when the expenditures were relatively light, the following amounts were spent by the railway system for paving:

Market Street Railway Company	$129,808.81
California Street Cable Railroad Co.	2,000.42
Municipal Railway	14,373.59
Total	**$146,182.82**

For 1927 the expenditures were approximately $170,000.

The railways must always bear some expense for paving as openings made along the rail for the purpose of tightening joints, etc., will necessitate a certain amount of repaving, which is a legitimate obligation of the railway. However, they can be relieved of all the cost of new pavement or repavement except any excess cost due to the presence of the street railway tracks in the street.

The appraisals show that the railways have immense sums invested in the paving along their tracks on which they should be allowed to set up depreciation reserves and earn interest. The former are relatively high as the life of pavement is short as compared with other parts of the roadway.

The following shows the reproduction cost of pavement by systems:

REPRODUCTION COST OF PAVEMENT.
June 30, 1928.

Municipal Railway	$ 929,803
Market Street Railway Company	4,439,959
California Street Cable Railroad Co.	166,230
Total	**$5,535,992**

Considering five and a half million dollars as the cost of the pavement paid for by the railways, interest at 5 per cent, depreciation at 4 1-3 per cent, together with $150,000 per year for maintenance, the street car riders must annually pay

through fares $663,333 for paving which impedes rather than improves the street car service.

Under the present system the railway patron pays for the paving in front of his own property where there is no car line and then through the car line helps to pay for the pavement in front of someone's else property. The further injustice of the present plan is evident when we consider that the property owner who gets out of paying the full cost of paving the street in front of his lot has his property value increased by the fact that the car line passes along his street. It seems only just to shift this burden to those who own the property or those who use the pavement for their own private means of transportation.

In the United States nearly one hundred street railways have either been relieved of a large part of the paving obligations, or the requirements have been so modified as materially to reduce the expense to the company of maintaining the street surface.

On March 20, 1923, the people of San Diego voted, through an amendment to the franchise of the San Diego Electric Railway, to relieve the Company of its obligations. Under this amendment to the franchise the San Diego Electric Railway Company is required to pay for only that portion of any construction in excess of that covered by the specifications for the improvement of the remainer of the street.

The State of Connecticut by an act of legislature in May, 1925, reduced the paving requirements exacted from the street railway to eight inches on each side of each rail.

A number of railways in Illinois have been relieved of all paving obligations except for the repairs of damage caused by the presence of the tracks.

In Portland, Maine, the railway company pays for the track foundations, but the cost of paving is divided on the basis of twenty per cent to be paid for by the company and eighty per cent by the municipality.

In the State of Massachusetts, through an act of legislature, the obligation of the street railways has also been reduced.

In 1925 the street railways in Montana were relieved of all charges for paving except where damaged paving is caused by the presence of the tracks or by the carrying out of repairs to the tracks.

In the city of Newark, New Jersey, which has a population of four hundred fifty thousand, the railway company has been relieved of the obligation to pay a portion of the cost of new pavement, although it still retains the obligation to repair any damage caused through the tracks.

Many other cases could be cited in detail so that there is ample precedent for relieving the railways of the cost of paving except such as is required on account of the presence of the tracks. It is estimated that the adoption of such legislation would relieve the San Francisco railways of an expenditure amounting to possibly $100,000 per year for maintenance. There seems to be no way by which they can be reimbursed for their capital expenditures of the past, but they could be relieved of a large part of them in the future.

POSSIBLE INCREASES IN REVENUE.

Jitneys

No great increase in revenue can be expected under the continued five cent fare. Two slight additions could be secured—one by eliminating jitney competition on streets already served by the street railways. At the present time one hundred and fifty of these vehicles are under license and it is inconceivable that they could

continue to operate unless they collect at least ten dollars per day. On the basis of a three hundred day year this would mean four hundred fifty thousand dollars a year, a part of which might be diverted to the street railways—possibly $200,000.

All of the jitney revenue cannot be secured, as some passengers use the street cars to the nearest point where they can get jitney service; there they leave the car and pay a second fare on the automobile. This is done to secure the faster service given by the automobile, which so far the street cars have not been able to provide. A similar condition is found on Mission Street where a ten cent fare is charged local passengers boarding Market Street Railway suburban cars. Many pay ten cents for a ride inside the city limits for the purpose of either securing a seat or making a trifle better time. These examples show the demand for quick service regardless of cost.

This high speed trade is being catered to in some cities by the installation of de luxe bus service operated in some cases by the street car lines. The fare is twenty-five cents and every passenger is guaranteed a seat.

The marked growth of the taxicab business in San Francisco is another indication of the desire for quick service with little consideration for cost, as the minimum charge is 25 cents for the first quarter mile or less and 10 cents for each additional quarter mile.

U. S. Mail Carriers.

A second possible source of increase in revenue is the United States Post Office Department. At present mail carriers on duty are transported free by the three roads. This is a privilege which has been granted more or less universally throughout the country, although it has been withdrawn in many localities, in which case the Post Office Department either purchases tickets which are issued to the carrier, or pays a flat sum annually for the service rendered. An estimate has been made of the possible revenue which might be derived from this source, and it is believed that not less than twenty thousand dollars per year could be secured for the carrying of postmen. As the Post Office Department is a business institution with an annual budget it should stand on its own legs and assume this burden.

Bus Operation

At the present time the Municipal Railway is operating five bus routes and the Market Street Railway three bus routes. Under date of May 1st, 1928, Superintendent Boeken of the Municipal Railway reported to the Board of Public Works that the revenue of the bus lines would be increased by approximately $36,000 annually if the practice of interchanging transfers between bus lines and street car lines were eliminated, requiring that all bus passengers pay a 5c fare. He also recommended the discontinuance of the Marina Bus thereby saving a loss of approximately $9,000 a year. I made these same recommendations to the Public Utilities Committee of the Board of Supervisors in June, 1928.

The estimate of possible increase in revenue which may be derived from the Market Street Bus Lines by the elimination of the transfer privilege is $25,000. making the total increase in revenue and saving by the elimination of the transfer between the cars and buses $70,000 annually. This same rule is now in effect on the Embarcadero Buses. There is no question that the expense of operating the automobile buses warrants an increase in revenue, as even under the proposed arrangement the buses will not be self-supporting. At the same time the service is essential.

Skip-Stop Operation

There are a number of long lines on which it will be possible not only to

effect a saving in power, but also to secure better running time through the establishment of the skip-stop.

In the Richmond and Sunset Districts, the distance between stops is 310 feet or seventeen to the mile. For the best service, under ten stops per mile is considered essential. By stopping only at alternate streets in these Districts, the number of stops per mile will be reduced to eight and one-half.

The present short distance of 310 feet should be compared with the average spacing of stops of 481 feet on all the east and west streets in the Western Addition and the spacing of from 584 to 908 feet on Mission and parallel streets. It will be possible to put this skip-stop into effect on the California Street, Clement Street, Geary Street, McAllister Street, Lincoln Way, Judah Street, and Taraval Street lines. The arrangement of stops will be such that the westbound cars will stop at every other block, say at even numbered avenues, in which case eastbound cars would stop at the odd numbered avenues, thus equalizing the walking distance for all patrons.

It has been difficult to estimate the exact saving, but the improvement in speed and service and the saving in power will be a benefit to the patrons and the railway alike.

The installation of skip-stops is very desirable, as is very evident from a little calculation which shows that with a scheduled speed of ten miles per hour and eight stops to the mile a stop has to be made every forty-five seconds. The motorman then has to shut off the current, apply the brakes, open the gate, discharge and admit passengers, close the gate, and again accelerate the car in intervals of forty-five seconds. This puts a very heavy burden on the motorman and results in difficulty in maintaining schedule speed. Any lengthening of the interval given the motorman in which to make these moves must result in improved conditions.

Automobile Parking

In the appendix to this report, following the description of the present routings, there is presented a table showing the actual running times of a large number of the important routes. The running time is shown both inbound and outbound, for four periods of the day—morning rush hour, mid-day period, evening rush hour, and night hour—and in each case is the average of 10 trips. These were secured from the point checks. Immediately below the total running time of each line is shown the present schedule allowance. A comparison of these two figures gives the relation of the actual running time to the schedule allowance.

The following tabulation shows the average minimum and maximum running times of 10 trips for 8 sections of Sutter Street, Market Street, and Mission Street together with the per cent of increase of maximum time over minimum. These percentages of increase show that the average maximum time is in most cases more than 200% of the average minimum time:

AVERAGE ACTUAL RUNNING TIME.
(10 Trips)

Street	From	To	Minimum	Maximum	% Increase maximum over Minimum
Sutter	Kearny	Powell	1.75 Min.	5.25	300
	Powell	Fillmore	4.95	10.75	208
Market	Ferry	Kearny	4.79	9.41	196
	Kearny	Powell	2.05	4.01	196
	Powell	Larkin	3.98	8.45	212
	Larkin	Gough	1.80	3.93	218
Mission	Ferry	Fifth	4.65	9.95	214
	Fifth	Sixteenth	6.80	12.00	177

The major reason for this marked increase in running time is the interference from automobiles largely occasioned by parking on the downtown streets. While the time of parking is limited and the space which may be used is restricted even one parked automobile in a block may cause traffic to swing over on street car tracks and slow up all traffic. This form of interference should not be allowed to continue as thousands of people in street cars are delayed for the convenience of a relatively small number who desire to park their automobiles.

To improve conditions all parking in the downtown area should be prohibited, at least between the hours of 7 and 10 A. M. and 3 and 6 P. M. This allows five hours in the business day during which present parking regulations may remain. The area in which no parking should be allowed is bounded on the south by Howard Street, on the north by Bush Street, on the west by Ninth and Larkin Street. This restricted parking area should further be extended to cover Mission Street to Twelfth Street, Market Street to Valencia Street and Hayes Street. McAllister Street, Turk Street, Eddy Street, Ellis Street, O'Farrell Street, Geary Street, and Sutter Street, to Van Ness Avenue. This restriction may seem drastic but is absolutely essential to proper movement of all kinds of traffic during the rush hours.

A similar elimination of parking was recently instituted in the Loop District in Chicago covering all hours of the day. The increased facility with which traffic has moved through this district is nothing short of marvelous and while the retail merchants felt that the elimination of parking would work a hardship on their business, they have found that the decrease in congestion has improved, rather than injured, business conditions. While the streets no longer have the former congested appearance, checks indicate that much more traffic is being handled both by auto and by street car than was previously possible.

It has been impossible to make an estimate of any monetary savings through the establishment of these restrictions yet there is no question that benefits will be felt not only financially but in the saving of time for street car patrons.

Net Effect On Revenue

The effect of the increased wage scale is reflected in the cost of operation under municipal ownership as set up under Chapter XII. If all of the railways are brought under municipal ownership and the present Municipal Railway wages and working conditions are applied to the combined system the resulting increases in unit costs will be fixed by conditions beyond the control of the operating officers.

The possible savings and the increases in revenue which have been suggested do not necessarily follow the acquisition of the system and the placing of it under municipal control. It may not be possible to effect all of the savings which have been estimated, or it may be possible to effect greater economies. Some of the changes suggested will require legislation in order to place them in effect.

The following is a summary of the possible effects on the result of operation:

Elimination of paving costs	$100,000
Elimination of jitney competition—additional revenue	200,000,
Revenue from Post Office employees	20,000
Additional revenue from buses by eliminating transfers	66,000
Saving on Marina Bus	9,000
Total	**$395,000**

CHAPTER XII.

FINANCIAL RESULTS OF MUNICIPAL OPERATION

In order to make a comprehensive picture of the financial results to be expected after the acquisition of the Market and California Street properties by the Municipal Railway, three different compilations have been made with a view to bringing into separate tables the possible results to be expected.

The first of these, Table XLI, entitled "Comparative Revised Income Statement of the Market Street Railway Company, California Street Cable Railroad Company, and Municipal Railway for the year 1928," shows in parallel columns the results obtained by the three separate organizations after making a 3% depreciation allowance for each.

The figures are for the calendar year 1928 for each of the two private companies and for the fiscal year 1927-1928 for the Municipal Railway. The figures used for operating revenue, operating expense, and taxes, together with inerest on outstanding bonds, were taken from the annual reports of the Companies to the California Railroad Commission, and the Municipal Railway figures from the published annual report.

The figures for depreciation on the Market Street Railway and on the California Street Cable Railroad properties are 3% of the reproduction cost as taken from the valuations made in connection with this report. The figure used for the Municipal Railway is the combined depreciation allowance and accident reserve shown in the annual report. The private companies include their accident charges in operating expenses.

This table shows that after taxes, the Market Street Railway would have a net available for interest of $25,078 while the California Street Cable Road would have a deficit of $31,078. The Municipal Railway pays no taxes, so its net available for interest is the same as the Companies' net before taxes.

After deducting interest on outstanding bonds, each system shows a loss, the total for the three being $788,539. This statement is only comparative to a certain extent as, from the information at hand, there is no question that the Market Street Railway cares for a considerable amount of depreciation in its operating expenses.

It has also, as has been shown, accumulated estimated deferred maintenance to the extent of $550,000. This table does not take into consideration revenue other than that known as operating revenue. Non-operative income in the case of the Municipal Railway amounted to $88,448, of which $43,802.28 was profit from the sale of bonds which will not be a receiving source of income. For the California Street Cable Railroad non-operative income was $13,553.13. The same figure for the Market Street Railway was $25,924.80. In the case of the Municipal Railway, this is income which will remain with the railway. In the case of the private corporations, if they were purchased by the City, it would still remain with the corporations unless some of the non-operative property which produces a portion of this revenue, were also taken over.

Table No. XLII is the estimated cost of operating the three systems combined under the conditions now applying on the Municipal Railway and operating all of the service of the two companies as at present. A detailed estimate has been made showing the probable expenses of operating the Market Street system. To the total of the first four groups are added the operating cost of the Municipal Railway for the fiscal year 1927-28 exclusive of general and miscellaneous expenses and the

TABLE XLI.

COMPARATIVE REVISED INCOME STATEMENT.
MARKET STREET RAILWAY COMPANY, CALIFORNIA STREET CABLE RAILROAD COMPANY AND MUNICIPAL RAILWAY.

	Market Street Railway	California Street Cable Railroad	Total Private Companies	Municipal Railway*	Total Railways
Operating Revenue	$9,754,461	$514,110	$10,268,571	$3,477,666	$13,746,237
Operating Exp. (Excl. Depn.)	7,746,613	442,735	8,189,348	3,012,641	11,201,989
Net Revenue	$2,007,848	$ 71,375	$ 2,079,223	$ 465,025	$ 2,544,248
Less Depreciation	1,375,770	69,021	1,444,791	345,652‡	1,790,443
Net Before Taxes	632,078	$ 2,354	$ 634,432	$ 119,373	$ 753,805
Taxes	607,000	33,432	640,432	.....	640,432
Net Available for Interest	$ 25,078	$ 31,078†	$ 6,000	$ 119,373	$ 113,373
Interest on Outstanding Bonds	$ 743,554	.....	$ 743,554	$ 158,358	$ 901,912
Loss After Interest	$ 718,476		$ 749,554	$ 38,985	$ 788,539

*Fiscal Year 1927-1928
†Deficit
‡Provision for Depreciation and Accidents

TABLE XLII.

ESTIMATE OF COST OF OPERATING THE PRESENT SERVICE OF MARKET STREET RAILWAY, CALIFORNIA STREET CABLE RAILROAD COMPANY, AND MUNICIPAL RAILWAY SYSTEM UNDER MUNICIPAL CONDITIONS.

OPERATING EXPENSES.

Market Street Railway	Trolley	Cable	Total
Car Miles:			
Railway	25,352,372	1,146,467	26,498,839
Motor Coach			265,999
Car Hours			
Railway	2,757,751	181,602	2,939,353
Motor Coach			27,875
Miles of Track	275	17	292
Way and Structures			
Track Maintenance, 292 Miles at $2000		$ 584,000	
Rehabilitation (15 years each)		73,800	
Buildings		60,000	
Total Way and Structures Excl. Deprn.			**$ 717,800**
Equipment			
Trolley 25,352,372 Car Mi.—3.27c		$ 829,023	
Cable 1,146,467 Car Mi.—4.36c		49,986	
Motor Coach 266,000 Car Mi.—5.6 c		14,896	
Total Equipment Excl. Deprn.			**$ 893,905**
Power			
Trolley		$1,300,000	
Cable		97,000	
Motor Coach (Gasoline and Oil)		13,000	
Total Power			**$ 1,410,000**
Conducting Transportation			
Trolley and Cable 2,939,353 Car Hr.—$1.97		$5,790,525	
Motor Coach 27,875 Car Hr.— 1.07		29,826	
Total Conducting Transportation			**$ 5,820,351**
Total Market Street Railway Operating Expenses Excluding Depreciation and General Miscellaneous			**$ 8,842,056**
Market Street Railway			$ 8,842,056
*Municipal Railway, Excl. Deprn. and Gen. and Mis.			2,802,612
†California Street Cable Railroad Co., Excl. Deprn.			609,291
Total			**$12,253,959**
‡General and Miscellaneous			1,181,000
Total Operating Expenses			**$13,434,959**

OPERATING REVENUE.

Market Street Railway			$ 9,754,461
Municipal (Calendar Year)			3,490,763
California Street Cable Railroad Co.			514,110
Total Operating Revenue			**$13,759,334**
Net Before Depreciation			$ 324,375
Depreciation		$1,711,615	
Interest on Bonds Outstanding		901,912	2,613,527
Loss After Interest On Bonds			$ 2,289,152

*Fiscal Year 1927-1928.
†California Street Railway Report P.-69, including General and Miscellaneous.
‡Market Street and Municipal Only

cost of operating the California Street Cable Railroad as set up as item number twelve in Plan I on page sixty-nine of the California Street Cable Railroad Report. This gives a total figure of $13,424,959 as operating expense before depreciation.

The total operating revenue of the three systems is $13,759,334, showing a net of $324,375. This net would be changed to a deficit by the dedecution of depreciation and interest. Depreciation at 3%, as required by ordinance, is $1,711,615, and interest on outstanding bonds $901,912, making a total for these two items of $2,613,527, which, if deducted from the net, would produce a deficit of $2,289,152. This makes no allowance whatever for interest on the capital invested in the properties not covered by bonds.

The California Street Cable Railroad has no bonds, the Market Street Railway $10,366,000 and the Municipal Railway as of January 1, 1929, $2,999,000.

This calculation shows the necessity for rearrangement of the routing and the effecting of all economies possible if the municipality is to acquire the two private companies.

The methods employed in making up this estimate are those detailed under the statement which is presented for the combined operation with proposed reroutings, economies, etc.

Combined Operating Expense

The third estimate Table XLIII is the estimated cost of the combined operation of the three systems, in which advantage is taken of all of the suggested plans for rerouting, involving the reconstruction of some cable tracks, the abandonment of certain portions of each system, the construction of a small amount of additional trackage, and the installation of new special work to make possible the operation of the cars over the proposed routes.

TABLE XLIII.

ESTIMATE OF COMBINED OPERATION OF MUNICIPAL, MARKET STREET AND CALIFORNIA CABLE STREET SYSTEMS.

Track Miles			
Total Present Municipal			74
Market Street			292
California Cable			11
			377
Less Abandoned Track			
California Cable	2.8		
O'Farrell	.9	3.70	
Municipal		1.40	
Market Street		19.70	25
			352
Plus New Track			9
Net Trackage Under Combined Operation			361
	Car Hours		**Car Miles**
Proposed Rail	3,700,000		34,000,000
Bus Operation	105,006		984,622
Way and Structures			
Ordinary Maintenance 361 Miles @ $2,000			$ 722,000
Maintenance in connection with rehabilitation			73,800
Buildings—Municipal	$ 2,500		
Market Street	60,000		
California Cable	1,000		63,500
Total Way and Structures (Excl. Deprn.)			**$ 859,300**

Equipment		
Electric Cars @ 32,400,000 C. M. @ 3.27c		$ 1,059,480
Cable Cars @ 1,600,000 C. M. @ 4.36c		69,760
Buses @ 985,000 C. M. @ 5.6c		55,160
Total (Excl. Deprn. on Equipment)		**$ 1,184,400**
Power		
Electric 32,400,000 C. M. @ 5.3c		$ 1,717,200
Cable 1,600,000 C. M. @ 8.0c		128,000
Bus—Gas and Oil (13,000 Mkt. Street, 21,000 Municipal)		34,000
Total (Excl. Deprn. on Equipment)		**$ 1,879,200**
Conducting Transportation		
Electric and Cable Operation 3,700,000 C. H. @ $1.97		$ 7,289,000
Bus Operation 105,000 Car Hours at $1.07		112,350
Total		**$ 7,401,350**
General and Miscellaneous—Combined Systems		**$ 1,249,000**

SUMMARY.

Way and Structures	$ 859,300	
Equipment	1,184,400	
Power	1,879,200	
Conducting Transportation	7,401,350	
General and Miscellaneous	1,249,000	
Total Excluding Depreciation		**$12,573,250**
Depreciation		
Straight Line Annuity		
Present Market Street System	$1,375,770	
Present Municipal	266,824	
Present California Street Cable*	66,177	
	$1,708,771	
Additions $44,068		
Abandonments 97,088	53,020	
Net Depreciation		$ 1,655,751
Total Operating Expenses and Depreciation		**$14,229,001**
Operating Revenue	**Calendar Year 1928**	
Present Market Street Railway	$ 9,754,461	
Present Municipal	3,490,763	
Present California Street Cable	514,110	
	$13,759,334	
Less Loss a/c Transfers	400,000	$13,359,334
Net Loss Before Fixed Charges		$ 869,667

*California Cable Report P. 69, Item 9, Plan 2.

At the head of the table are shown the present track miles, from which is deducted the mileage of tracks to be abandoned. To the net mileage thus obtained have been added the miles of new track necessary, producing a net total of 361 miles of single track in the combined system compared with 377 miles of track in the three separate systems, a reduction of 16 miles.

Following this is shown the proposed number of car hours and car miles to be operated by street cars and buses. After this are the details of the five major accounts headed "Way and Structures," "Equipment," "Power," "Conducting Transportation," and "General and Miscellaneous." The total of these accounts is $12,573,250. To this has been added 3% for depreciation bringing the grand total for Operating Expenses and Depreciation to $14,229,001. From this has been deducted the estimated revenue amounting to $13,359,334.00 showing a net loss from

Operation, after depreciation, of $869,667. In this statement no consideration is given to interest on the invested capital nor to money necessary to retire bonds.

The methods of making the estimates submitted are given below in detail. The present track mileage has been taken from the reports of the three systems while the number of miles of track to be abandoned and the mileage of the new track construction necessary have been taken from Chapter VIII of this report.

The number of car miles and car hours which it is proposed to operate on an average week day has been tabulated by routes in Table XXX. The daily average car miles of 95,388 will be operated for 305 days of the year. Sunday and holiday mileage will be operated on the remaining 60 days of the year. In order to arrive at the number of car miles operated on Sundays and holidays 79.6% of the week day mileage was taken, as this represents the ratio which the Municipal Railways Sundays and holidays mileage bears to its week day average. A test check was made on the present Market Street mileage which practically confirms the factor of 79.6%. As a further check the percentage which the proposed average daily mileage bears to the present average daily mileage was applied to the combined mileage for the year 1928. The result very closely checks the figure of 34,000,000 car miles which has been used in this estimate. This 34,000,000 miles was divided into electric car miles and cable car miles, the electric car miles being 95.2% of the total, or 32,400,000 miles and the cable car miles 4.8% or 1,600,000 car miles.

Car hours were estimated in the same manner, showing the annual total car hours to be 3,700,000 consisting of 92.9% electric and 7.1% cable or 3,440,000 figured by taking the 1928 actual mileage and reducing it by the mileage of one week day, to allow for 1928 being a Leap Year, resulting in 105,006 car hours and 984,622 car miles.

Way and Structures

In order to arrive at the cost of maintaining Way and Structures $2,000 per mile of track was determined as representing the average cost of maintaining a mile of single track under Municipal Railway experience. This multiplied by the 361 miles to be operated gives an annual cost of $722,000. In order to bring the track of the combined systems up to a standard at which they may be maintained at the Municipal Railway unit cost, $550,000 is provided through capital expenditure allowed elsewhere in this report.

As is shown under the section entitled "Track and Roadway Replacements," the heavy reconstruction program which will have to be followed for the next 15 year will require an annual charge of $73,800 against operation for the purpose of removing the track to be reconstructed. The amount set aside for the maintenance of buildings of each system as shown on the table totals $63,500. The grand total of these items for the maintenance of Way and Structures is $859,300 which includes no allowance for depreciation.

Equipment

The cost of maintaining electric cars, cable cars, and buses is dependent on the number of car miles operated. The costs of the three systems were analyzed and additions made to cover the increased cost of labor at the Municipal wage scale, and 260,000 respectively. The annual motor coach mileage and car hours were as a very large percentage of the items entering into this group of accounts is labor. The result of this study showed the cost of maintaining electric cars to be 3.27c, cable cars 4.36c, and buses 5.06 respectively per mile operated. Multiplying these costs by the proposed mileage for each class of equipment a grand total of $1,184,400.00 was reached.

Power

The cost of power for electric and cable cars is likewise based on the number of car miles operated. The cost of purchasing power should remain the same per car mile but there will be additions in the labor costs on account of the municipal wage scale. Costs per car mile for power used in operating electric cars and cable cars were taken as 5.3c and 8c respectively. These, multiplied by the number of miles of each of the two classes, together with the actual cost of gasoline and oil used on the motor coaches, produces a grand total of $1,879,200.00.

Conducting Transportation

This item of expense being labor is dependent on the hours of service rather than on the number of miles operated. The present Municipal Railway costs were therefore applied to the number of hours of electric, cable, and bus operation, producing a total annual cost of $7,401,350.00.

General and Miscellaneous Expenses

The estimating of this group of expenses has been more or less difficult as no procedure has been established under which it has been possible to set up an operating organization for the combined systems.

The expenditures by the three systems were as follows:

Market Street Railway Company	$1,026,193
Municipal Railway Fiscal Year 1927-1928	333,211
California Street Cable Railroad Company	77,380
Total	**$1,436,784**

This group of accounts includes salaries and expenses of general officers and their assistants, legal expense, pensions, injuries and damages, insurance, stationery, store expense, garage expenses, and rents.

In order to arrive at probable financial results from combined operation, Table XLIV, showing estimated general and miscellaneous expenses of the combined systems, was prepared. No material reduction can be made in the present general and miscellaneous expenses of the companies except in the first item, salaries and expenses of general officers and general office expenses.

TABLE XLIV

ESTIMATED GENERAL AND MISCELLANEOUS EXPENSES COMBINED MARKET STREET RAILWAY, MUNICIPAL RAILWAY AND CALIFORNIA STREET CABLE RAILROAD.

Municipal Railway and Market Street Railway	
Salaries and expenses of general officers, general office clerks, general office supplies, office quarters, and legal expense	$ 236,000
Pensions	350,000
Miscellaneous General Expense	20,000
Injuries and Damages	390,000
Insurance	25,000
Stationery and Printing	50,000
Store Expense	35,000
Garage and Stable	50,000
Rent of Tracks and Terminals	25,000
Total	**$1,181,000**
California Street Cable Railroad	
From Page 60 of C. S. C. R. R. Report Submitted in December, 1928	68,000
Total	**$1,249,000**

The estimated figures for general officers include no allowance for a portion of the cost of a Public Utilities Commission in the event of its establishment. The charges to the railway on account of the formation of such a body would without

doubt be very small as compared with the operating expenses of the railroad, and might result in savings elsewhere which would more than offset any additional cost occasioned by their administration of the railway.

Depreciation

Depreciation of the Market Street system has been covered under Chapter X "Depreciation" in which it was shown that the sum of $1,400,000.00 should be set up annually to cover the entire system. However, as required by ordinance, 3% of the reproduction cost or $1,375,770 has been used. At the present time, under Ordinance, there is being set up 3% of the cost of the Municipal Railway System in a Depreciation Reserve Fund which for the year 1928 is $266,824. This figure has been used in the estimate but on the same basis on which the Market Street System depreciation was figured at $1,400,000 should be $293,000. The depreciation for the California Street Cable System, taken from Page 69, Item 9, Plan 2, of the California Street Cable Railroad report, is $66,177. These figures for depreciation cover the whole of the three systems as they now exist. In order to make allowances on account of additions and abandonments there was deducted $53,020 making the net depreciation $1,655,751. This added to the five groups of expenses brings the grand total of Expense and Depreciation to $14,229,001.

Operating Revenue

The present operating revenue of the three systems for the calendar year 1928 totaled $13,759,334.00. The year 1928 was Leap Year but no deduction was made on this account because the revenues during the latter part of the year were severely affected by an epidemic of "flu." It is thought that the reduction on this account would offset the additional day in the year.

This total revenue will be reduced in the combined system through the use of the universal transfer privilege. In order to estimate this reduction it has been considered that the total number of passengers carried, both revenue and transfer, will be the same and that the only difference would be through the shifting of some of the total number from the revenue to the transfer column. In order to estimate the amount of this shift it was considered that the ratio of revenue passengers to total passengers on the combined system would be approximately the same as that of the present Market Street System, which is 74.1%. This ratio on the Municipal System is now 82.4% and on the California Street Cable System, 83.7%.

The total number of passengers carried by the three roads during 1928 was 358,225,535. Applying the Market Street System ratio of revenue passengers to this total it was found that 265,500,000 revenue passengers would use the combined system and 92,700,000 transfer passengers. These totals show a decrease of 8,100,000 revenue passengers, which represents the estimated shift from revenue to transfer passengers which can be expected through the establishment of the universal transfer privilege. This loss of revenue passengers paying 5c will result in a decrease of $405,000 in annual revenue. This may be stated in another way by saying that at the present time one passenger out of each 33 pays two fares in order to make one continuous trip. This seems a conservative estimate as the majority of the passengers have so adjusted their habits that they are not now paying two fares. There is now a limited transfer agreement between the companies which accommodates some inter-system passengers and the universal transfer privilege will not affect the results at such inter-system transfer points. There is no ready method of determining how many passengers use more than one system by paying two fares to complete a trip so this method of estimating seems to be the only logical means of arriving at the approximate loss in revenue which will be occasioned by the universal transfer privilege. Deducting for round figures the sum of $400,000, the

probable operating revenue of the three systems combined is estimated to be $13,359,334.00.

As shown by Table XLIII the revenue fails to meet Operating Expenses and Depreciation by $869,667.

Capital Charges

The foregoing pages show the possible operating expenses and operating revenue from the combined system under municipal ownership. In order to complete the story it is necessary to take into consideration capital charges.

It has already been shown that the deficit after deducting operating costs from revenue would be $869,667, to which must be added the annual charges on the financial obligations incurred through the acquisition and operation of the combined properties. In order to arrive at these fixed charges, it has been necessary to make some assumptions, and in presenting these they should be considered only as assumptions. No definite price has as yet been determined for the purchase of either the California Street Cable Railroad or for the Market Street Railway. The fixed charges of the Municipal Railway, however, are known.

The assumptions are as follows:

1. That the portions of the California Street system desired by the City would be acquired for $604,000.

2. That the portions of the Market Street system desired by the City would be acquired for $17,500,000.

3. That bringing up deferred maintenance would require an expenditure from capital of $550,000.

TABLE XLV

FINANCIAL RESULTS OF OPERATING COMBINED SYSTEM BASED ON ASSUMED PURCHASE PRICES.

Assumed Purchase Price		
California Street Cable R. R.		$ 604,000
Market Street Railway		$17,500,000
		$18,104,000
Other New Capital		
Rehabilitation Requirements		550,000
New Track and Special Work Requirements for Rerouting		1,682,000
Total New Capital		**$20,336,000**
Annual Charges.		
Charges on New Capital		
Interest on New Capital at 5%		$ 1,016,800
Amortization Capital at 2½%		508,400
Total Annual Charges on New Capital		**$ 1,525,200**
Charges at Present Outstanding		
Municipal Railway Capital		
Interest	$147,000	
Amortization	260,000	347,000
Total Annual Capital Charges on Combined System		$ 1,872,200
Plus Operating Deficit (Page 163)		869,667
Total Deficit Combined Operation		$ 2,741,867
Less Possible Savings (Page 158)		395,000
Total Deficit Combined Operation if Savings Effected		**$2,346,867**

4. That new track connections and special work for the purpose of putting into effect the proposed rerouting scheme, would require an expenditure of $1,682,000.

The total of these figures, amounting to $20,336,000 represents the new capital required. The details of this capital, together with interest and amortization charges, are set up in Table XLV which shows that after adding the operating deficit to the annual fixed charges the total deficit will be $2,741,867. Deducting from this figure the possible effects of municipal operation as covered in Chapter XI, this deficit is reduced to $2,346,867.

In order to retain the five cent fare, these deficits would have to be made up through taxation. Assuming that the assessed valuation of the City is $850,000,000 it is found that without the savings there would have to be added to the tax rate 32.3 cents, and with the savings 27.6 cents.

In order to provide data for figuring the change in tax rate if the purchase price of the properties differs from the assumptions which have been made, there are included two tables XLVI and XLVII, the first of which shows in the left-hand column new capital requirements varying between eighteen and thirty millions of dollars. Following this are columns showing interest on new capital, interest on outstanding Municipal Railway Bonds, total interest charges, the amortization of the new bonds and of the present Municipal Railway Bonds on the basis of forty years. Following this is the total amortization fund required and in the right-hand column of the table is the total of interest charges and amortization.

On the second table in the left-hand column is repeated the new capital followed by the operating estimated deficit of $869,667, to which are added capital charges taken from Table XLVI, producing the gross deficit. In the next column is shown the tax rate on an assessed valuation of $850,000,000 necessary to carry the gross deficit. In the succeeding column is the gross deficit less the estimated possible effect of municipal operation. The final column shows the tax rate necessary in order to carry this net deficit after savings.

The difference in tax rate occasioned by each million dollar increase or decrease in purchase price is 0.88 cent. This same information shown on Table XLVII has been plotted in chart form as being a little easier of interpolation.

TABLE XLVI

ANNUAL INTEREST AND AMORTIZATION CHARGES ON NEW CAPITAL FROM 18 TO 30 MILLION DOLLARS AND PRESENT MUNICIPAL RAILWAY DEBT.

	Interest			Amortization of Funded Debt			
New Capital Requirements	On New Capital @ 5%	On Outstanding Municipal Ry. Bonds 4½ and 5%	Total Interest Charges	New Bonds	Present Municipal Ry. Bonds	Total	Total Charges
$18,000,000	$ 900,000	$147,000	$1,047,000	$450,000	$200,000	$650,000	$1,697,000
19,000,000	950,000	147,000	1,097,000	475,000	200,000	675,000	1,772,000
20,000,000	1,000,000	147,000	1,147,000	500,000	200,000	700,000	1,847,000
21,000,000	1,050,000	147,000	1,197,000	525,000	200,000	725,000	1,922,000
22,000,000	1,100,000	147,000	1,247,000	550,000	200,000	750,000	1,997,000
23,000,000	1,150,000	147,000	1,297,000	575,000	200,000	775,000	2,072,000
24,000,000	1,200,000	147,000	1,347,000	600,000	200,000	800,000	2,147,000
25,000,000	1,250,000	147,000	1,397,000	625,000	200,000	825,000	2,222,000
26,000,000	1,300,000	147,000	1,447,000	650,000	200,000	850,000	2,297,000
27,000,000	1,350,000	147,000	1,497,000	675,000	200,000	875,000	2,372,000
28,000,000	1,400,000	147,000	1,547,000	700,000	200,000	900,000	2,447,000
29,000,000	1,450,000	147,000	1,597,000	725,000	200,000	925,000	2,522,000
30,000,000	1,500,000	147,000	1,647,000	750,000	200,000	950,000	2,597,000

TABLE XLVII

DEFICITS AND TAX RATE INCREASE NECESSARY NEW CAPITAL FROM 18 TO 30 MILLION DOLLARS AND PRESENT MUNICIPAL RAILWAY DEBT.

New Capital Requirements	Operating Deficit	Capital Charges from Table XLVI	Gross Deficit	Tax Rate* Necessary To Carry Deficit	Net Deficit If Savings Effected	Tax Rate* Necessary To Carry Net Deficit
$18,000,000	$869,667	$1,697,000	$2,566,667	30.20c	$2,171,667	25.55c
19,000,000	869,667	1,772,000	2,641,667	31.08	2,246,667	26.43
20,000,000	869,667	1,847,000	2,716,667	31.96	2,321,667	27.31
21,000,000	869,667	1,922,000	2,791,667	32.84	2,396,667	28.20
22,000,000	869,667	1,997,000	2,866,667	33.72	2,471,667	29.08
23,000,000	869,667	2,072,000	2,941,667	34.60	2,546,667	29.96
24,000,000	869,667	2,147,000	3,016,667	35.49	2,621,667	30.84
25,000,000	869,667	2,222,000	3,091,667	36.37	2,696,667	31.72
26,000,000	869,667	2,297,000	3,166,667	37.25	2,771,667	32.61
27,000,000	869,667	2,372,000	3,241,667	38.14	2,846,667	33.49
28,000,000	869,667	2,447,000	3,316,667	39.02	2,921,667	34.37
29,000,000	869,667	2,522,000	3,391,667	39.90	2,996,667	35 25
30,000,000	869,667	2,597,000	3,466,667	40.78	3,071,667	36.14

*Based on assessed valuation of $850,000,000.

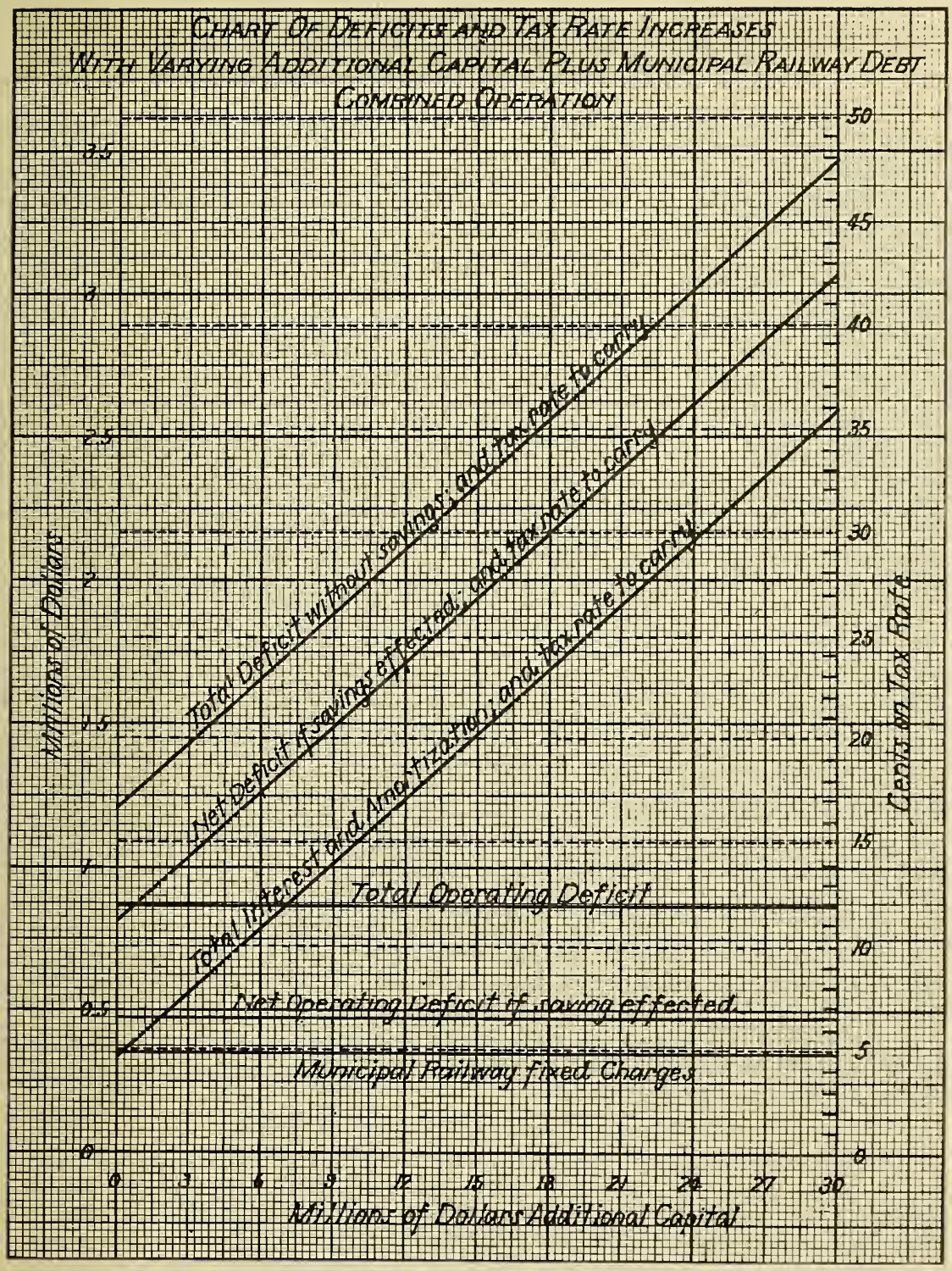


Chart Of Deficits and Tax Rate Increases
With Varying Additional Capital Plus Municipal Railway Debt
Combined Operation
Millions of Dollars
Cents on Tax Rate
Total Deficit without savings and tax rate to carry
Net deficit if savings effected, and tax rate to carry
Total Interest and Amortization and tax rate to carry
Total Operating Deficit
Net Operating Deficit if savings effected
Municipal Railway fixed Charges
Millions of Dollars Additional Capital
0
3
6
9
12
15
18
21
24
27
30
0
5
10
15
20
25
30
35
40
45
50
0
0.5
1
1.5
2
2.5
3
3.5

CHAPTER XIII

NEW ROUTES AND RAPID TRANSIT

The adjacent population map of San Francisco, which has been revised to accompany this report, shows all of the railway and bus lines now being operated in the City. On it is shown by dots the distribution of the population as of May, 1928. This information was secured by multiplying the voters registration by three, which is one of the methods sometimes used in making an estimate of population.

The total population derived through the method is 677,200 and while this is not the figure used in the other studies of this report, it is the total secured through using the best method available for showing the distribution of the population.

Areas which are between one-quarter and one-half mile removed from transportation facilities are shown by coarse ruling. Those more than one-half mile from transportation facilities by fine ruling.

A large portion of the shaded areas comprises United States Military Reservations, golf courses, sand dunes, John McLaren Park and the forest surrounding Mt. Sutro, Twin Peaks, and Mt. Davidson. Some of these areas are not available for settlement and others have not yet been developed, and there is practically no population in them. Of the remaining sections shaded, only one, the Southern Heights, has sufficient inhabitants to warrant the extension of service. The population of the shaded portion of the Southern Heights area is shown by the dots as 3200. This map shows almost complete coverage of the City with the existing transportation lines. Where patrons can secure street car service within five or ten minutes walk of their homes there should be little cause for complaint.

In connection with this study, requests for transportation which have been filed from time to time, were given consideration.

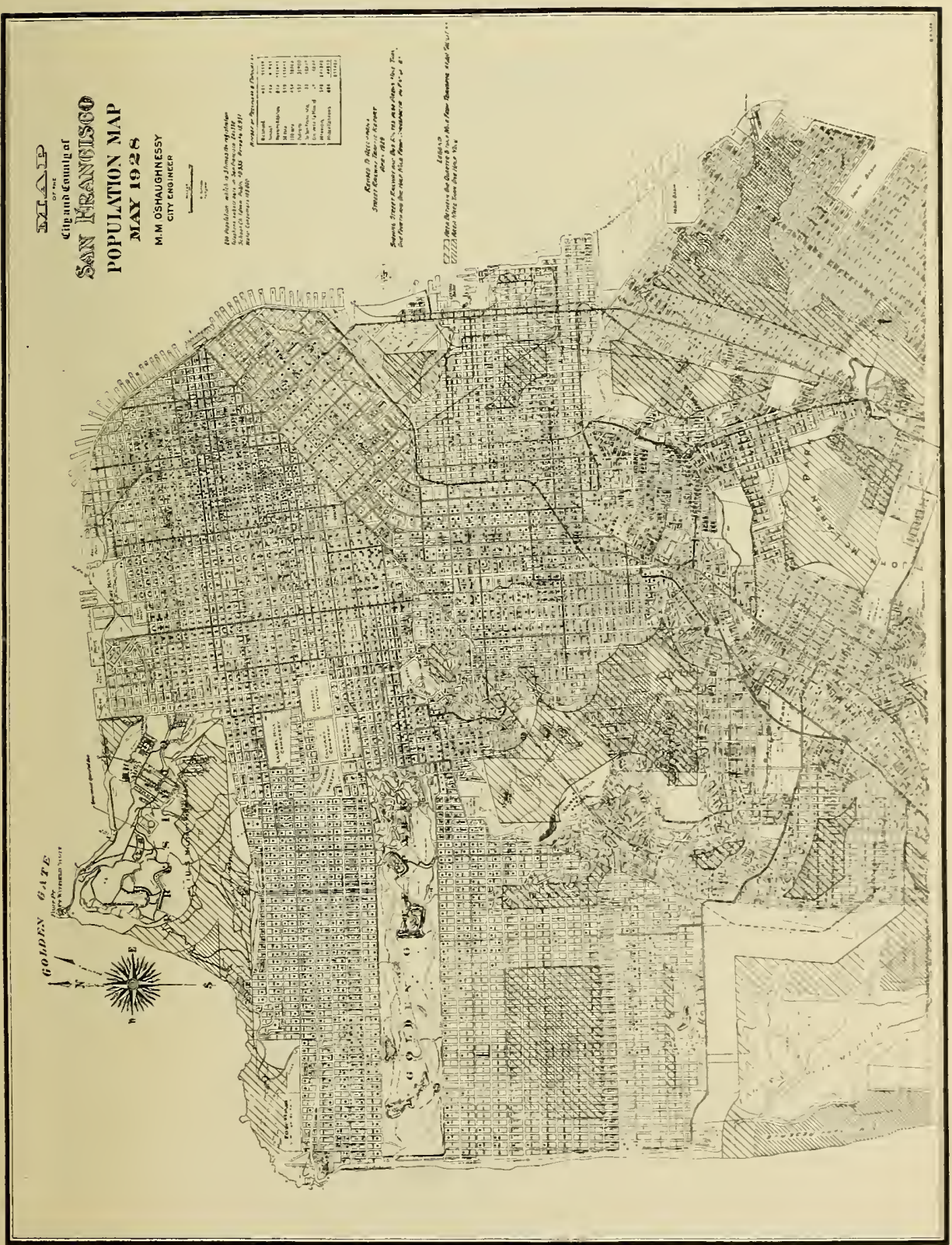
A bus line into the Southern Heights District should be operated from Seventeenth Street and Potrero Avenue, thus providing transportation for the 3200 people now more than one-quarter mile from the nearest railway. The district lies on the Potrero Hills, making walking difficult, and the people are not of a class generally owning automobiles and are therefore dependent on public transportation.

In the Richmond District it is practically half a mile from the service on Fulton Street to Geary Street. In order to better serve the growing population of this section the Balboa Street line proposed in the recent bond issues should be built, together with connections on Turk Street to Market.

In place of the Marina Bus line, discontinuance of which is recommended, there should be constructed street car tracks to be operated in connection with the present "F" line on Chestnut Street.

The total new trackage involved is ten and one-half miles.

It was proposed to purchase real estate and establish a municipal car barn in the Sunset District to accommodate the service operated over the "N" line on Judah Street, thus saving a considerable amount of mileage necessary in order to take care of these cars at the Potrero Car House. The acquisition of the Market Street Railway Company's block now used as a car yard and lying between Lincoln Way, Irving Street, Funston Avenue and Fourteenth Avenue, will provide the necessary real estate for this car house. The location is central, and the property is level. The future development of the Sunset District will demand increasing car service making a carhouse increasingly necessary to take care of the equipment. As this block has been used as a car yard for a good many years, there should be no


MAP
OF THE
City and County of
SAN FRANCISCO
POPULATION MAP
MAY 1928
M.M. O'SHAUGHNESSY
CITY ENGINEER
GOLDEN GATE

objection to improving the property with a proper structure. The outlet is on Lincoln Way, which faces Golden Gate Park, obviating any complaint from property holders in front of the barn.

Provision should be made adjacent to the Seventeenth Street Car Barn for shop facilities as was also covered by the previous bond issue.

In order to take care of these additions to the properties, as well as the equipment necessary to operate them, $2,000,000 will be required.

Subway and Rapid Transit

Much thought has been given to the subject of subway and rapid transit. The subject of a subway under Market Street has already been touched upon under the heading "The Relief of Market Street."

For a number of years plans have been formulating for a rapid transit line parallel to and south of Market Street, connecting with Capp Street into the Mission District. This would involve the widening of Capp Street and would provide a rapid transit service between the thickly populated Mission District and points adjacent to the business district, and at the same time connect with the proposed transbay bridge terminal loop. This may also provide means for increasing the speed and service to San Mateo County, although Twin Peaks Tunnel and its connections have been designed to make a high speed interurban route to the south.

For the reason that the interurban traffic will have very little effect on the street railway problems, it has not been gone into in detail. To attempt to do so would have materially increased the amount of work involved in this report as well as its size. A proper consideration of any interurban scheme on the Peninsula would have necessitated the making of surveys and the laying out of routes to serve not only the portions of the Peninsula now built up but also those which are likely to be built up within a reasonable period of time.

CHAPTER XIV.

CONCLUSIONS AND RECOMMENDATIONS

In bringing this comprehensive and detailed report to a close I am presenting as concisely as possible the results of my finding on the problems involved and am making certain recommendations.

The Municipal Railway, which commenced operation on Geary Street in 1912 and was extended by a bond issue at the time of the Exposition in 1915 and which since that time has expanded its mileage out of earnings, has been of inestimable benefit to the people of the City. In addition to rendering a most excellent service it has maintained to date the five cent fare for the entire City and has provided transportation into the sections of the City not otherwise served, thus developing new territory and adding to the City's growth.

The total cost for road and equipment, as of June 30, 1928, was approximately $9,000,000.

To construct the original portions, there were issued serial bonds as follows:

	Date Issued	Total Issue	Interest Rate	Final Date Redemption	Unmatured As of 1/1/29
Geary Street Railway	1910	$1,900,000	4½ %	7/1/34	$ 570,000
Market Street Railway	1910	81,000	4½ %	7/1/34	29,000
Municipal Railway	1913	3,500,000	5 %	12/1/52	2,400,000
		$5,481,000			$2,999,000

The difference between the total cost of $9,000,000 and the $3,000,000 outstanding bonds is $6,000,000, which represents the proportion of cost of the property paid to date out of the earnings of the road. With the exception of $306,000 contributed out of general taxes to cover interest on the funded debt prior to the commencement of operation and the cost of the original bond election, the taxpayers have contributed nothing to the creation of the properties. All interest and bond redemption charges have been met annually out of the railway earnings.

The Municipal Railway, which has been constructed entirely under the direction of the City Engineer, is one of the best street railway properties in the world. Construction is of the very highest standard and the service rendered meets all the requirements of the sections of the City through which it passes. Many features of the construction were especially designed by the City Engineer to fit San Francisco conditions. Not only has the work been executed at a minimum cost, but, on account of its sturdy character, operating and maintenance expenses have been kept considerably below many privately owned railways of the country paying a much lower wage scale. San Francisco, therefore, may be justly proud of the accomplishments of the Municipal Railway.

At the present time San Francisco is the only large city in the United States running on a five cent fare where a portion of the cost of railway operation is not contributed through taxes. In New York City, where the fare has been retained at five cents in spite of strenuous efforts to increase it the citizens contribute through taxes approximately two and one-half cents for every ride, which amounts to an annual total of approximately $14,000,000.

There is no question that unification of the street railway system of transportation would result in a greatly improved service and be of material benefit to the people of the City. Street railway transportation is essential to the general welfare and growth of the community, permitting as it does the establishment of residential

districts more or less remote from the business centers, thus avoiding the intolerable congestion which would otherwise result. The larger stores and office buildings could not exist without cheap mass railway transportation, as all passengers must come from more or less remote residence districts.

Poor transportation to the downtown business district would tend more strongly to develop local business districts in the outlying sections of the City. These local centers with their neighborhood stores and moving picture theatres not only materially cut into downtown business but reduce the earnings of the street railways. First class street railway service from all sections of the City is therefore essential to the growth of the downtown area, but it is also essential to the proper development of residential districts.

Street railway transportation should be considered as a necessity almost on a par with water, sewers, and fire and police protection, something with which everyone within the City is vitally concerned. It is true that many individuals make little or no use of the facilities provided, at the same time the successful conduct and growth of their business may largely depend upon street car transportation. Under the present conditions, the entire cost of operation is paid for by the riding public, while property owners and general business, making only occasional use of the cars, pay nothing toward keeping the service available. Such is not the case with other public utilities, such as water, gas, electricity, and telephones, where, in order to have the utility available at all times, the occasional user must pay a service charge to retain the privilege of even infrequent use.

It is the definitely expressed intent of the City's Charter that we shall gradually acquire and ultimately own and operate all of the utilities serving the citizens. The time has now arrived when through the expiration of the majority of the important franchises of the Market Street Railway Company and through the expiration of all of the franchises of the California Street Cable Railroad it becomes necessary to determine the City's future policy with relation to the street railways.

The City should either carry out its definite Charter obligation by taking over and operating the properties of the private companies, or adopt a plan whereby the private organizations can continue to render the character of service necessary to a progressive city.

We find that reconstruction work, involving the expenditure of more than half a million dollars, has been deferred by the Market Street Railway Company beyond the proper time; this in spite of the fact that the company pays a much lower wage scale than the municipal lines. It is clearly evident from our studies that the private companies cannot continue to render the service required under the five cent fare and maintain their tracks and equipment to a proper standard and that the quality of service and the condition of the property must become poorer and poorer each year.

In view of the Charter requirements, the expiration of franchises, and the fact that the municipality is already in the street railway business, it seems only logical that the City at this time should take the necessary steps to acquire the properties of the two private companies through purchase and in combination with the Municipal Railway provide a unified transportation system at a single fare.

In view of the marked increase in the costs of material, labor and everything else entering into the operation of a street car system the City may be justly proud of the fact that it has thus far been able to maintain the five cent fare. It has already been shown in the report that the combined system cannot be operated under Municipal Railway conditions on the revenue derived from the present rate of fare. The records show that the use of street cars is diminishing and it is evi-

dent that if the present trend holds, none of the systems can continue indefinitely to operate successfully at this fare.

If the five cent fare is to be maintained, it must be by contributions from taxes to meet resulting deficits. It is obviously impossible for the municipality to contribute toward the cost of service rendered by private corporations. Therefore the unification of the systems under municipal ownership seems the only satisfactory way of meeting the problem with which we are now confronted.

Under this plan a portion of the burden is justly shifted to the property owner who now contributes nothing to the street railway service but who perhaps receives the greatest benefit. Means are also provided by which the occasional rider will meet what is generally known as the "stand-by charge" necessary to maintain service for his use on demand. Raising the street railway fare to meet a deficit would put all of the burden on the regular patrons who for the most part are people not owning automobiles or who find it to their advantage or liking to use street cars.

There has been set up in detail, a schedule of the operating deficits which would have to be met out of taxation, together with the corresponding increase in the tax rate, to maintain the five cent fare. This method of financing the deficits sustained by the railway system distributes the burden more equitably and while it is true that the cost of operation under municipal ownership will be increased over that of the private corporations, due solely to a higher wage scale, affecting 3,000 employees, it should be pointed out that as a result of these higher wages more money will be spent by employees within the City to the general benefit of the retail business, and better living conditions will be provided for transport labor.

Recommendations To Purchase

In view of the above brief statement and the facts developed in the report, the following recommendations are made:

I. That a Public Utilities Commission be established for the purpose of administering the utilities of San Francisco, as is now being done in New York and Detroit.

II. That the City of San Francisco acquire, by purchase, the properties of the California Street Cable Railroad and the Market Street Railway Company, at the most advantageous figures possible to be arrived at through the negotiations authorized by Ordinance No. 8125.

III. That the negotiations with the California Street Cable Railroad be on the basis of purchasing it on its earning value, namely, $604,463, as set up in my report on that Company, and that negotiations with the Market Street Railway be with a view to securing their property for $17,500,000.

IV. That the properties of the Market Street Railway and the California Street Cable Railroad, if and when secured, be combined and operated with the Municipal Railway.

V. That the fare be retained at five cents with a universal transfer privilege.

VI. That deficits resulting from the unified operation and retention of the five cent fare be met by additions to the tax rate.

Bonds Required

To carry out these recommendations it will be necessary to reach an agreed price with the two companies and to submit to the electors a proposal to issue bonds to cover the cost of purchase of the two private systems, and provide sufficient money to cover all deferred maintenance and the additional facilities which have been recommended. Further bonds should be authorized to be sold from time to time as the necessity arises, to meet the increased capital cost incident to re-

habilitating the tracks of the company. The amount of these bonds should be sufficient to allow an expenditure of approximately one-half million dollars annually for several years.

Operating Recommendations

The following additional recommendations are made contingent on the acquisition and unification of the three roads with the thought of securing the most economical, efficient, and satisfactory operation of the combined system:

I. That the rerouting plan set up in this report, with such modifications as developments may show to be necessary, be placed in effect.

II. That in order to speed up the transportation in the downtown district during the rush hours, all parking of vehicles be prohibited between 7 A. M. and 10 A. M. and between 3 P. M. and 6 P. M. on the streets north of Howard Street, south of Bush Street and east of Ninth Street and Larkin Street with extensions on Mission Street to Twelfth Street, Market Street to Valencia Street, McAllister Street, O'Farrell Street, Geary Street, and Sutter Street, to Van Ness Avenue.

III. That all licenses to operate jitney buses be withdrawn and their operation be prohibited.

IV. That the practice of exchange of transfers between buses and street cars be discontinued.

V. That the railroad system be relieved of all costs of paving except those incidental to making track repairs and any additional cost of street paving occasioned by the presence of track.

VI. That the "skip-stop" method of operation be placed in effect where street spacing permits.

VII. That the United States Post Office Department be required to pay the transportation of its employees on duty, now carried free.

APPENDIX

APPENDIX "A"

ORDINANCE AUTHORIZING REPORT AND VALUATION

Bill No. 8617. Ordinance No. 8125

Be it ordained by the People of the City and County of San Francisco, as follows:

WHEREAS, Under its charter the City of San Francisco is committed to the policy of gradually acquiring and ultimately owning all of its public utilities, and

WHEREAS, The City and County of San Francisco now operates a municipally owned street railway system furnishing transportation to many parts of the City, and

WHEREAS, The franchises of the California Street Cable Railroad Company and a number of franchises of the Market Street Railway Company will expire during the year 1929, and

WHEREAS, It is essential that this Board of Supervisors adopt a plan under which the people of San Francisco can be assured of proper transportation facilities after the expiration of the existing franchises.

THEREFORE, In order that this Board may have before it as a basis for determining the best policy to be pursued in the solution of the City's transportation problem:

Section 1. The Board of Public Works is hereby authorized, empowered and directed to instruct the City Engineer to investigate and report to this Board of Supervisors upon the immediate and future street railway transportation requirements of San Francisco; to what extent and in what manner the existing street railway trackage and facilities in San Francisco could best be utilized in meeting present and future transportation requirements, and what portions of the existing privately owned street railway systems, if any, should be acquired by the City to be used in connection with the Municipal Railway system for providing a unified street railway, and the operating results which might be expected under municipal operation of such a unified system, from the point of view both of service to the public and finances; together with any alternative method or plan for meeting the transportation requirements other than purchase of the properties by the City.

Section 2. The City Engineer and the City Attorney jointly are hereby authorized and empowered to make a valuation of the properties of the California Street Cable Railroad Company and the Market Street Railway Company, both as a whole and as to such parts thereof, as the City Engineer reports are necessary or desirable for acquisition by the City.

Section 3. The City Attorney is hereby authorized, empowered and directed to make the necessary studies of the legal questions involved in the transportation problems, and to recommend and prepare the legislation necessary or advisable to facilitate the solution of the railway problem.

Section 4. The City Engineer, the City Attorney, the Public Utilities and Finance Committees of the Board of Supervisors, jointly are hereby authorized, empowered and directed to enter into preliminary negotiations with the California Street Cable Railroad Company and the Market Street Railway Company looking toward the possibility of the acquisition of the whole or parts of these privately owned systems.

Section 5. The Board of Public Works and the City Attorney are hereby authorized to employ such assistants as may be required and necessary to carry on the studies and investigations and prepare the report provided for in this ordinance, and said assistants and all expenses incident to the preparation of the report are to be paid out of the General Fund.

Section 6. This ordinance shall take effect immediately.

(Approved July 27th, 1928.)

APPENDIX "B"

DESCRIPTION OF PRESENT ROUTES

For the purpose of comparison with the proposed routes described in the report and as a matter of record there has been compiled a description of each street car and bus route now being operated by the Market Street Railway, California Street Cable Railroad and the Municipal Railway. Except where otherwise noted, cars of each line operate in both directions between terminals over the route described.

MARKET STREET RAILWAY.

Main and Crosstown Trolley Routes.

Line No. 1—Sutter and California Streets

From Ferry Loop via Market Street, Sutter Street, Presidio Avenue, California Street, Sixth Avenue, and Clement Street to Thirty-third Avenue. Owl service is operated every sixty minutes over the above route.

Line No. 2—Sutter and Clement Streets

From Ferry Loop via Market Street, Sutter Street, Presidio Avenue, California Street, Parker Avenue, Euclid Avenue, Arguello Boulevard, Clement Street, Thirty-third Avenue, Geary Street, Forty-eighth Avenue and Private Right of Way to Sutro Baths.

Owl service is operated over this route every 60 minutes between the Ferry Loop and Thirty-third Avenue and Clement Street.

Line No. 3—Sutter and Jackson Streets

From Ferry Loop via Market Street, Sutter Street, Fillmore Street, Jackson Street, and Presidio Avenue to California Street.

Line No. 4—Turk and Eddy Streets

From Ferry Loop via Market Street, Eddy Street, Divisadero Street, Sacramento Street, Arguello Boulevard, Lake Street, Sixth Avenue, Clement Street, Eighth Avenue, and Fulton Street to Sixth Avenue. Return from Fulton Street via Sixth Avenue, Lake Street, Arguello Boulevard, Sacramento Street, Divisadero Street, Turk Street, Mason Street, Eddy Street, and Market Street to Ferry Loop. Daily, except Sundays, this line turns back from 4:30 to 6:30 P. M. at Eddy, Powell, and Market Streets instead of operating via Market Street to the Ferry Loop. Owl service is operated every 30 minutes over the entire route.

Line No. 5—McAllister and Fulton Streets

From Ferry Loop via Market Street, McAllister Street, Private Right of Way, Fulton Street, and La Playa to Balboa Street Loop. During the off peak hours of the day and night alternate cars on this line operate between the Ferry Loop and Twenty-fifth Avenue and Fulton Streets only. Owl service is operated every 30 minutes between the Ferry Loop and Twenty-fifth Avenue and Fulton Street.

Line No. 6—Haight and Masonic Avenue

From Ferry Loop via Market Street, Haight Street, Masonic Avenue, Frederick Street, Clayton Street, Carl Street, Stanyan Street, Parnassus Avenue, Judah Street, and Ninth Avenue to Pacheco Street. Owl service is operated between Haight and Market Streets and Ninth Avenue and Pacheco Street every 60 minutes beginning at 2:46 A. M.

Line No. 7—Haight Street and Ocean

From Ferry Loop via Market Street, Haight Street, Stanyan Street, Frederick Street, Lincoln Way, Private Right of Way, and La Playa to Balboa Street Loop. Owl service is operated every 60 minutes between Haight and Market Streets and Balboa Street Loop.

Line No. 8—Market Street

From Ferry Loop via Market Street and Castro Street to Eighteenth Street. Daily except Sundays a portion of the cars on this route during the A. M. and P. M. rush hours operate over the above route to Eighteenth and Castro Streets, then via Eighteenth Street and Market Street to Caselli Avenue switch-back. Owl service is operated every 60 minutes from Ferry Loop to Caselli Avenue switch-back.

Line No. 9—Valencia Street

From Ferry Loop via Market Street, Valencia Street, Mission Street, and Twenty-ninth Street to Noe Street. Daily except Sundays, during the A. M. and P. M. rush hours, a portion of the cars on this line operate from the Ferry Loop via Market Street, Valencia Street, and Mission Street to Geneva Avenue. Owl service is operated over this route every 30 minutes between the Ferry Loop and Daly City via Market Street, Valencia Street, and Mission Street to San Jose Avenue.

Line No. 10—Guerrero Street and Sunnyside

From Ferry Terminal via Embarcadero, Mission Street, Fourteenth Street, Guerrero Street, San Jose Avenue, Thirtieth Street, Chenery Street, Diamond Street, and Monterey Boulevard to Gennessee Street. After 6:26 P. M. this line terminates at Eighth and Market Streets instead of at the Ferry Terminal, cars thereafter operating from Market Street via Eighth Street to Mission Street, then as above to Gennessee Street. Owl service on this route is operated every 60 minutes between Fifth and Market Streets and Monterey Boulevard and Gennessee Street via Fifth Street, Mission Street, and regular route.

Line No. 11—Mission and Twenty-fourth Streets

From Ferry Terminal via Embarcadero, Mission Street, Twenty-second Street, Chattanooga Street, and Twenty-fourth Street to Hoffman Avenue. Return from Hoffman Avenue via Twenty-fourth Street, Dolores Street, Twenty-second Street, Mission Street, and Embarcadero to Ferry Terminal. Owl service on this line is operated every 30 minutes from Hoffman Avenue via Twenty-fourth Street, Dolores Street, Twenty-second Street, Howard Street, and Twenty-fourth Street to Utah Street, returning from Utah Street via Twenty-fourth Street, Howard Street, Twenty-second Street, Chattanooga Street, and Twenty-fourth Street to Hoffman Avenue.

Line No. 12—Mission Street and Ingleside

From Ferry Terminal via Embarcadero, Mission Street, Onondaga Avenue, Ocean Avenue, and Sloat Boulevard to Great Highway. After 6:20 P. M. this line terminates at Fifth and Market Streets instead of at the Ferry Terminal, cars thereafter operating from Market Street via Fifth Street, Mission Street, and above route to Sloat Boulevard and Great Highway.

Line No. 14—Mission Street and Daly City

From Ferry Terminal via Embarcadero and Mission Street to San Jose Avenue, Daly City.

Line No. 15—Kearny Street and North Beach

From Townsend Street (S. P. Depot) via Third Street, Kearny Street, Broadway, and Powell Street to Jefferson Street and Embarcadero. Owl service on this line is operated every 30 minutes from Twenty-third Street via Third Street and above route to Jefferson Street and Embarcadero.

Line No. 16—Third and Kearny Streets

From Sunny Dale Avenue (County Line) via San Bruno Avenue, Third Street, Kearny Street, Broadway, and Embarcadero to north Ferry Terminal.

Line No. 17—Haight Street and Ingleside

From Ferry Loop via Market Street, Haight Street, Stanyan Street, Frederick Street, Lincoln Way, Twentieth Avenue, Wawona Street, and Nineteenth Avenue to Sloat Boulevard. On Saturday and Sunday afternoons cars of this route continue on from Nineteenth Avenue and Sloat Boulevard via Sloat Boulevard to Great Highway. Owl service is operated every 60 minutes over above route between Haight and Market Streets and Nineteenth Avenue and Sloat Boulevard.

Line No. 18—Mission Street and Daly City

From Market Street via Fifth Street and Mission Street to San Jose Avenue, Daly City.

Line No. 19—Ninth and Polk Streets

From Brannan Street via Ninth Street, Larkin Street, Post Street, and Polk Street to North Point Street. Owl service on this line is operated every 30 minutes over above route between Larkin and Market Streets and North Point and Polk Streets.

Line No. 20—Fourth, Ellis, and O'Farrell Streets

From Third Street (S. P. Depot) via Townsend Street, Fourth Street, Ellis Street, Hyde Street, O'Farrell Street, Divisadero Street, Oak Street, and Stanyan Street to Haight Street. Return from Haight Street via Stanyan Street, Page Street, Divisadero Street, Ellis Street, Fourth Street, and Townsend Street, to Third Street (S. P. Depot).

Line No. 21—Hayes Street

From Ferry Loop via Market Street, Hayes Street, Stanyan Street, Fulton Street, and Eighth Avenue to Clement Street.

Line No. 22—Fillmore and Sixteenth Streets

From Broadway via Duboce Avenue, Church Street, Sixteenth Street, Kansas Street, Seventeenth Street, Connecticut Street, Eighteenth Street and Third Street to Twenty-third Street. Two-thirds of the cars of this line turn back at Sixteenth and Bryant Streets and operate only between that point and Fillmore Street and Broadway. Owl service on this line is operated every 30 minutes from Broadway over above route to Twenty-third and Third Streets, thence via Third Street to Wilde and San Bruno Avenues.

Line No. 23—Fillmore and Valencia Streets

From Divisadero Street via Sacramento Street, Fillmore Street, McAllister Street, Gough Street, Valencia Street, Mission Street, and Richland Avenue to Andover Street. Return from Andover Street via Richland Avenue, Leese Street, Mission Street, Valencia Street, Market Street, Gough Street, McAllister Street, Fillmore Street, and Sacramento Street to Divisadero Street.

Line No. 24—Mission and Richmond

From Folsom Street via Cortland Avenue, Mission Street, Sixteenth Street, Church Street, Duboce Avenue, Fillmore Street, Oak Street, Divisadero Street, Sacramento Street, Arguello Boulevard, Lake Street, and Sixth Avenue to Fulton Street. Return from Sixth Avenue via Fulton Street, Eighth Avenue, Clement Street, Sixth Avenue, Lake Street, Arguello Boulevard, Sacramento Street, Divisadero Street, Page Street, Fillmore Street, Duboce Avenue, Church Street, Sixteenth Street, Mission Street, and Cortland Avenue to Folsom Street.

Line No. 25—San Bruno Avenue

From Market Street via Fifth Street, Bryant Street, Army Street, Potrero Avenue, and San Bruno Avenue to Third Street and Wilde Avenue. Daily except Sundays during the A. M. and P. M. rush periods, cars of this route operate from Fifth and Market Streets over above route to Third Street and Wilde Avenue then via San Bruno Avenue to Sunny Dale Avenue (County Line). Owl cars operate every 60 minutes over this route from Fifth and Market Streets to Sunny Dale and San Bruno Avenues (County Line) via route as above described.

Line No. 26—Guerrero Street and Daly City

From Ferry Terminal via Embarcadero, Mission Street, Fourteenth Street, Guerrero Street, San Jose Avenue, Thirtieth Street, Chenery Street, Diamond Street, and San Jose Avenue to Mission Street (Daly City). After 6:16 P. M. this line terminates at Eighth and Market Streets instead of at the Ferry Terminal, cars operating thereafter from Market Street via Eighth Street to Mission Street then above route to Daly City.

Line No. 27—Bryant Street

From Market Street via Second Street. Bryant Street, and Twenty-sixth Street to Mission Street. Return from Mission Street via Twenty-sixth Street, Bryant Street, Eighth Street, Brannan Street, and Second Street to Market Street. Daily except Sundays and holidays during the P. M. rush hour period, a portion of the cars of this route operate from Second and Market Streets, outbound only, via route as above described to Twenty-sixth and Mission Streets, then via Mission Street and Cortland Avenue to Folsom Street. After 6:16 P. M. there is no service over this route between Second and Market Streets and Twenty-sixth and Bryant Streets. A shuttle service is thereafter operated on Twenty-sixth Street from Mission Street to Bryant Street connecting with all cars of the No. 25 line at Twenty-sixth and Bryant Streets. Sunday and holiday operation of this route is restricted to shuttle service on Twenty-sixth Street between Mission Street and Bryant Street from 6:07 A. M. to 12:30 A. M.

Line No. 28—Harrison Street and Depots

From Ferry Terminal via Embarcadero, Howard Street, Steuart Street, Harrison Street, Second Street, Brannan Street, and Third Street to Townsend Street (S. P. Depot). Return from Townsend Street (S. P. Depot) via Third Street, Brannan Street, Second Street, Bryant Street, Sterling Street, Harrison Street, Steuart Street, Howard Street, and Embarcadero to Ferry Terminal.

Line No. 29—Third Street, Kearny Street, and Broadway

From Wilde and San Bruno Avenues via Third Street, Kearny Street, and Broadway to Davis Street. This line does not operate after 6:25 P. M. Sunday and holiday operation provided only from 11:27 A. M. to 6:33 P. M. from Wilde and San Bruno Avenues, via Third Street, Kearny Street, Broadway, and Powell Street to Jefferson Street and Embarcadero.

Line No. 30—Eighth and Army Streets

From Market Street via Eighth Street, Bryant Street, Sixteenth Street, Kansas Street, Seventeenth Street, Connecticut Street, Eighteenth Street, Third Street, Army Street, Folsom Street, Twenty-sixth Street, Howard Street, and Twenty-second Street to Mission Street. Return from Mission Street via Twenty-second Street, Howard Street, Twenty-sixth Street, Bryant Street, Army Street, Third Street, Eighteenth Street, Connecticut Street, Seventeenth Street, Kansas Street, Sixteenth Street, Bryant Street, and Eighth Street to Market Street. Cars leaving Twenty-second

and Mission Streets after 7:15 P. M. operate via Twenty-second Street, Howard Street, Twenty-sixth Street, Folsom Street, and Precita Avenue to Army Street then via regular route to Eighth and Market Streets.

Line No. 32—Hayes and Oak Streets

From Ferry Loop via Market Street, Hayes Street, Fillmore Street, Oak Street, and Stanyan Street to Haight Street. Return from Haight Street via Stanyan Street, Page Street, Fillmore Street, Hayes Street, and Market Street to Ferry Loop. Daily except Sundays during the A. M. rush hour period, and daily except Saturdays and Sundays during the P. M. rush hour period, all cars on this line operate from Ferry Loop via Market Street, Hayes Street, Fillmore Street, Oak Street, Masonic Avenue, Frederick Street, Clayton Street, Carl Street, Stanyan Street, Parnassus Avenue, and Judah Street to Ninth Avenue. Return from Ninth Avenue via Judah Street, Parnassus Avenue, Stanyan Street, Carl Street, Clayton Street, Frederick Street, Masonic Avenue, Page Street, Fillmore Street, Hayes Street, and Market Street to Ferry Loop. This line ceases operation with the outbound car leaving the Ferry Loop at 5:47 P. M. On Sundays and holidays this line is not operated.

Line No. 33—Eighteenth Street and Park

From Third Street via Harrison Street, Fourteenth Street, Guerrero Street, Eighteenth Street, Market Street, Caselli Avenue, Clayton Street, Ashbury Street, Frederick Street, Clayton Street, and Waller Street to Stanyan Street. This line terminates at Eighth and Harrison Streets after 6:21 P. M., cars operating thereafter between Eighth and Harrison Streets and Waller and Stanyan Streets over above route.

Line No. 34—Sixth and Sansome Streets

From Brannan Street via Sixth Street, Taylor Street, Post Street, Kearny Street, Bush Street, and Sansome Street to Chestnut Street and Embarcadero. After 6:20 P. M. this line operates on a 42-minute headway until 12:00 A. M. Sundays and holidays this line is operated on a 48-minute headway from 6:24 A. M. to 12:24 A. M.

Line No. 35—Howard Street

From Ferry Terminal via Embarcadero, Howard Street, and Twenty-fourth Street to Rhode Island Street. Owl service over the Twenty-fourth Street portion of this route is operated by No. 11 line.

Line No. 36—Folsom Street

From Ferry Terminal via Embarcadero, Howard Street, Steuart Street, Folsom Street, and Precita Avenue to York and Army Streets. After 7:36 P. M. this line terminates at Precita Avenue and Folsom Street, cars operating thereafter between Ferry Terminal and Precita Avenue and Folsom Street via above described route.

Line No. 40—San Mateo

From Market Street via Fifth Street, Mission Street through Daly City and Colma, then Private Right of Way through San Bruno, Lomita Park, and Millbrae to Burlingame, then via San Mateo Drive, Baldwin Avenue, "B" Street, and Third Avenue to Main Street, San Mateo. Return from Third Avenue (San Mateo) via Main Street, Second Avenue, "B" Street, Baldwin Avenue, Ellsworth Avenue, Poplar Avenue, and San Mateo Drive to Burlingame then via reverse of above route to Fifth and Market Street, San Francisco.

Line No. 41—Second and Market Streets, Southern Pacific Depot

From Market Street via Second Street, Brannan Street, and Third Street to Townsend Street (S. P. Depot). This line operates daily except Sundays and holi-

days during the A. M. rush hour in order to connect with the S. P. peninsula trains, seven round trips between terminals being made during that period. Daily except Saturday and Sundays and holidays during the P. M. rush hour, six round trips are made by cars over this route between the above two terminals in order to take passengers to the S. P. Depot in time to connect with the S. P. peninsula commuter trains.

Line No. 42—First and Fifth Streets

From California Street via Battery Street, First Street, Folsom Street, Second Street, Brannan Street, Third Street, Townsend Street, Fourth Street, Brannan Street, and Fifth Street to Market Street. Return from Market Street via Fifth Street, Brannan Street, Second Street, Folsom Street, First Street, and Battery Street to California Street. During the A. M. and P. M. rush hour periods, this line operates only between California and Battery Streets and Third and Townsend Streets (S. P. Depot) via above route. The schedule service during the off-peak hours of the day is 50 minutes, but our checks have shown that a period of non-operation exists in the morning from 9:30 to 11:45 A. M. and in the afternoon from 1:35 to 3:45 P. M. No service is provided over this route nights or on Sundays and holidays.

EXTENSION, SHUTTLE, AND SHORT LINE ELECTRIC ROUTES.

Fillmore Street Hill

From Broadway via Fillmore Street to Marina Boulevard. This line is in reality an extension of the No. 22 line, but because of the excessive grades the standard equipment operated on the No. 22 line could not be operated over this route.

Tenth and Post Streets

From Bryant Street via Tenth Street, Polk Street, Hayes Street, Larkin Street, McAllister Street, Leavenworth Street, and Post Street to Montgomery and Market Streets. This line is operated on a 40-minute headway from 6:40 A. M. to 6:00 P. M. daily except Sundays and holidays.

Visitacion Valley

From Mission Street via Geneva Avenue, Private Right of Way, Walbridge Street, Schwerin Street, McDonald Street, and San Bruno Avenue to Sunny Dale Avenue (County Line).

Divisadero Street Extension

From Sacramento Street via Divisadero Street to Jackson Street. Service on this route is provided daily on an eight minute headway from 7:16 A. M. to 5:58 P. M.

Bosworth Street

Owing to the construction of a grade crossing separation at Bosworth Street and the Bernal Cut, this line was temporarily discontinued on November 24, 1928, and operation has not yet been resumed.

South San Francisco

From South San Francisco Junction on the San Mateo line (Leipsic Station) via Private Right of Way, Grand Avenue, Swift Avenue, and Walker Avenue, to Western Meat Company Packing House.

CABLE ROUTES.

Washington and Jackson Streets

From Eddy and Market Streets via Powell Street, Jackson Street, Steiner Street, and Washington Street to Fillmore Street. Return from Fillmore Street via Washington Street and Powell Street to Eddy and Market Streets.

Powell and Mason Streets

From Eddy and Market Streets via Powell Street, Jackson Street, Mason Street, Columbus Avenue, and Taylor Street to Bay Street. Return from Bay Street via Taylor Street, Columbus Avenue, Mason Street, Washington Street, and Powell Street to Eddy and Market Streets.

Sacramento and Clay Streets

From Ferry Terminal via Embarcadero, Market Street, and Sacramento Street to Fillmore Street. Return from Fillmore Street via Sacramento Street, Larkin Street, Clay Street, and Embarcadero to Ferry Terminal.

Castro Street

From Eighteenth Street via Castro Street to Twenty-sixth Street.

Pacific Avenue

From Polk Street via Pacific Avenue to Divisadero Street.

MOTOR COACH ROUTES.

Crocker-Amazon

From Mission Street via Persia Avenue, Naples Street, Cordova Street, Baltimore Way, South Hill Boulevard, Geneva Avenue, Naples Street, Russia Avenue, and Mission Street to Persia Avenue.

Excelsior

From Mission Street via Silver Avenue, Edinburgh Street, Excelsior Avenue, Naples Street, Persia Avenue, Mission Street, Brazil Avenue, Moscow Street, Persia Avenue, Naples Street, Excelsior Avenue and Mission Street to Silver Avenue.

Mission Street—San Bruno Avenue (Silver Avenue)

From Silver Avenue via Mission Street, Maynard Street, Craut Street, Silver Avenue, and San Bruno Avenue to Felton Street. Return from San Bruno Avenue via Felton Street, Bowdoin Street and Silver Avenue to Mission Street.

MUNICIPAL RAILWAY.

Trolley Lines.

Line A—Geary Street and Park

From Ferry Loop via Market Street, Geary Street, and Tenth Avenue to Fulton Street.

Line B—Geary Street and Ocean

From Ferry Loop via Market Street, Geary Street, Thirty-third Avenue, Balboa Street, Forty-fifth Avenue, and Cabrillo Street to Great Highway Loop. Owl service over this route every 60 minutes.

Line C—Geary and California Streets

From Ferry Loop via Market Street, Geary Street, Second Avenue, Cornwall Street, and California Street to Thirty-third Avenue. Owl service is provided every 60 minutes over above route.

Line D—Geary Street and Van Ness Avenue

From Ferry Loop via Market Street, Geary Street, Van Ness Avenue, Union Street, Steiner Street, Greenwich Street, and Private Right of Way to Presidio Loop.

Line E—Union Street

From North Ferry Terminal via Embarcadero, Washington Street, Columbus Avenue, Union Street, Larkin Street, Vallejo Street, Van Ness Avenue, Union Street, Baker Street, Greenwich Street, and Private Right of Way to Presidio Loop. Return from Presidio Loop via Private Right of Way, Greenwich Street, Baker Street, Union Street, Van Ness Avenue, Vallejo Street, Larkin Street, Union Street, Columbus Avenue, Jackson Street, and Embarcadero to north Ferry Terminal. Owl service over this route every 30 minutes.

Line F—Stockton Street

From Market Street and Ellis Street via Stockton Street, Columbus Avenue, North Point Street, Van Ness Avenue, and Chestnut Street to Scott Street.

Line H—Potrero and Van Ness Avenues

From Army Street via Potrero Avenue, Division Street, Eleventh Street, Van Ness Avenue, Private Right of Way through Fort Mason to Laguna and Beach Streets. Owl service over this route every 30 minutes.

Line J—Church Street

From Ferry Loop via Market Street and Church Street to Thirtieth Street. Owl service over this route every 30 minutes.

Line K—Market Street and Ingleside

From Ferry Loop via Market Street, Twin Peaks Tunnel, West Portal Avenue, Junipero Serra Boulevard, Ocean Avenue, and Brighton Avenue to Grafton Avenue. Owl service is operated every 60 minutes between Market Street and Van Ness Avenue and Brighton and Grafton Avenues via above route.

Line L—Market and Taraval Streets

From Ferry Loop via Market Street, Twin Peaks Tunnel, Ulloa Street, Fifteenth Avenue, and Taraval Street to Great Highway. Owl service is operated every 60 minutes over this route between Market Street and Van Ness Avenue and Great Highway and Taraval Street.

Line M—Ocean View

From Junipero Serra and Sloat Boulevards at St. Francis Circle via Private Right of Way, Worcester Avenue, Randolph Street, Orizaba Avenue, and Broad Street to Plymouth Avenue.

Line N—Judah Street

From Ferry Loop via Market Street, Duboce Avenue, Sunset Tunnel, Carl Street, Arguello Boulevard, Irving Street, Ninth Avenue, and Judah Street to Great Highway.

MOTOR COACH LINES.

Line No. 1—Park

From Tenth Avenue and Fulton Street via Golden Gate Park and Ninth Avenue to Irving Street. Return from Ninth Avenue via Irving Street, Tenth Avenue, Lincoln Way, Golden Gate Park to Eighth Avenue and Fulton Street, then Fulton Street to Tenth Avenue.

Line No. 2—Ocean

From Cabrillo Street via Great Highway, Lincoln Way, Forty-eighth Avenue, and Great Highway to Sloat Boulevard.

Line No. 3—Monterey Boulevard

From Forest Hill Station via Laguna Honda Boulevard, Portola Drive, Miraloma Drive, Yerba Buena Avenue, Plymouth Avenue, and Monterey Boulevard to Edna Street. Return from Monterey Boulevard, via Edna Street, Hearst Avenue, Ridgewood Avenue, Monterey Boulevard, Plymouth Avenue, Yerba Buena Avenue, Miraloma Drive, Portola Drive, and Laguna Honda Boulevard to Forest Hill Station.

Line No. 4—Embarcadero

From Golden Gate Ferry Terminal at Hyde and Jefferson Streets via Jefferson Street, Leavenwort Street, Beach Street, Embarcadero, Berry Street, and 3rd Street, to Townsend Street (S. P. Depot). Return from 3rd Street (S. P. Depot) via Townsend Street, Embarcadero, Beach Street, and Hyde Street to Golden Gate Ferry Terminal at Jefferson Street. This line does not operate after 7:00 P. M.

Line No. 5—Marina

From Scott Street via Chetsnut Street and Divisadero Street to Marina Boulevard. Return from Divisadero Street via Marina Boulevard and Scott Street to Chestnut Street.

CALIFORNIA STREET CABLE RAILROAD

California Street

From Market and Drumm Streets via California Street to Presidio Avenue

Hyde and O'Farrell Streets

From Market Street and Grant Avenue via O'Farrell Street, Jones Street, Pine Street, and Hyde Street to Beach Street.

Jones Street Shuttle

From Market and McAllister Streets via Jones Street to O'Farrell Street.

MARKET STREET RAILWAY—PRESENT ROUTES
SUMMARY OF ACTUAL RUNNING TIME

Point	A. M. Rush In	A. M. Rush Out	Mid-Day In	Mid-Day Out	P. M. Rush In	P. M. Rush Out	Night In	Night Out
No. 1—Sutter & California Streets								
No. 2—Sutter & Clement Streets								
Layover—Ferry to	1.00		0.90		0.75		0.80	
Sutter & Kearny	6.20	4.85	4.70	6.00	6.05	9.50	3.50	3.95
Sutter & Powell	2.20	2.40	2.95	3.00	3.00	4.25	2.00	1.40
Sutter & Fillmore	14.65	4.95	9.05	7.80	8.30	10.75	6.60	9.35
California & Presidio		6.25	5.65	4.60	4.50	5.00	5.20	5.35
6th Avenue & Clement	5.75	5.30	6.55	5.45	5.30	6.80	5.20	6.10
32nd Avenue & Clement	8.70	7.85	7.65	7.85	7.55	8.10	7.85	6.55
Sutro Baths	8.80	6.70	7.00	8.40	8.30	7.80	7.10	7.20
Total	**46.30**	**38.30**	**43.55**	**43.10**	**43.00**	**52.20**	**37.45**	**39.90**
Present Schedule Allowance	**43.50**	**40.50**	**43.50**	**43.50**	**45.50**	**45.50**	**37.50**	**37.50**
No. 3—Sutter & Jackson Streets								
Layover—Ferry to	1.20		1.15		0.80		0.60	
Sutter & Kearny	7.00	5.55	4.90	5.60	6.80	10.55	3.00	3.75
Sutter & Powell	3.15	2.05	3.10	2.60	2.55	5.25	1.75	2.45
Sutter & Fillmore	9.45	7.10	8.25	8.25	8.95	9.00	7.20	8.45
Jackson & Fillmore	2.50	4.80	4.25	2.75	3.25	4.35	3.15	3.05
California & Presidio	9.40	4.10	3.85	6.11	5.50	5.70	5.55	4.20
Total	**31.50**	**23.60**	**24.35**	**25.31**	**27.05**	**34.85**	**20.65**	**21.90**
Present Schedule Allowance	**26.00**	**26.00**	**26.00**	**26.00**	**28.00**	**28.00**	**21.50**	**21.50**

RUNNING TIME—(Continued)

Point	A. M. Rush In	A. M. Rush Out	Mid-Day In	Mid-Day Out	P. M. Rush In	P. M. Rush Out	Night In	Night Out
No. 4—Turk & Eddy Streets								
Layover—Ferry to	1.05		1.10		5.80†		1.10	
Powell & Eddy	11.75	8.95	8.40	9.65			5.35	5.85
Turk—Eddy & Fillmore	7.75	6.80	8.95	8.10	7.75	8.35	8.05	7.65
Eddy & Divisadero	2.75	2.35	2.30	2.80	3.35	1.90	2.30	2.00
Sacramento & Divisadero	4.45	3.40	4.65	3.60	4.65	3.70	3.50	4.50
8th Avenue & Fulton	17.90*	12.00	19.25*	12.30	11.65*	14.95	15.40*	11.25
Total	**44.60**	**33.50**	**43.55**	**36.45**	**27.40**	**28.90**	**34.60**	**31.25**
Present Schedule Allowance	**36.00**	**36.00**	**36.00**	**37.00**	**25.00**	**28.00**	**31.00**	**33.00**
†Layover at Powell, Eddy & Market Streets								
*Including layover at 6th Avenue & Fulton								
No. 5—McAllister & Fulton Streets								
Layover—Ferry to	1.30		1.10		0.65		1.20	
Jones & McAllister	12.55	10.80	12.30	12.30	14.60	21.40	7.35	7.95
Larkin & McAllister	1.85	1.65	1.60	1.80	1.90	1.90	1.25	1.80
Fillmore & McAllister	4.05	4.75	4.75	4.95	5.15	5.25	4.40	4.30
Stanyan & Fulton	8.40	6.85	7.30	7.15	6.50	8.15	6.30	8.10
8th Avenue & Fulton	5.25	2.75	5.15	2.80	2.30	4.05	2.85	2.15
25th Avenue & Fulton	5.30	3.70	4.25	3.70	5.30	6.10	3.80	5.45
Cabrillo & La Playa	7.45	5.50	6.80	6.20	7.17	8.20	6.58	7.50
Total	**44.85**	**36.00**	**42.15**	**38.90**	**42.92**	**55.05**	**32.53**	**37.25**
Present Schedule Allowance	**43.00**	**41.00**	**42.00**	**41.00**	**44.00**	**43.00**	**36.00**	**35.00**

RUNNING TIME—(Continued)

Point	A. M. Rush In	A. M. Rush Out	Mid-Day In	Mid-Day Out	P. M. Rush In	P. M. Rush Out	Night In	Night Out
No. 6—Haight Street & Masonic Avenue								
Layover—Ferry to	1.10		0.80		0.65		1.20	
Haight & Gough	18.95	15.75	17.15	16.90	18.70	24.80	10.60	12.75
Fillmore & Haight	3.00	2.50	3.00	2.20	3.25	3.60	2.90	2.35
Haight & Masonic	5.15	4.50	4.40	5.50	4.35	5.15	3.10	4.75
9th Avenue & Judah	10.35	8.70	9.45	8.80	11.55	9.35	9.00	7.80
9th Avenue & Pacheco	4.25	4.40	4.10	4.20	2.95	5.60	3.05	4.25
Total	**41.70**	**35.85**	**38.10**	**37.60**	**40.80**	**48.50**	**28.65**	**31.90**
Present Schedule Allowance	**39.00**	**39.00**	**37.50**	**39.00**	**41.00**	**41.00**	**32.00**	**33.00**
No. 7—Haight Street & Ocean								
Layover—Ferry to	0.95		0.95		0.65		0.90	
Haight & Gough	19.60	15.70	16.25	16.50	19.80	24.45	11.80	12.10
Haight & Fillmore	3.45	2.60	2.90	2.95	3.00	3.35	2.60	3.05
Haight & Stanyan	7.95	8.00	6.75	8.05	7.40	8.15	6.90	7.50
20th & Lincoln Way	9.45	5.15	9.50	5.70	8.35	9.05	6.80	7.80
Cabrillo & La Playa	10.67	8.17	8.50	8.70	10.25	8.75	9.50	5.90
Total	**51.12**	**39.62**	**43.90**	**41.90**	**48.80**	**53.75**	**37.60**	**36.35**
Present Schedule Allowance	**47.00**	**44.00**	**45.50**	**44.00**	**49.00**	**46.00**	**40.00**	**39.00**

RUNNING TIME—(Continued)

Point	A. M. Rush In	A. M. Rush Out	Mid-Day In	Mid-Day Out	P. M. Rush In	P. M. Rush Out	Night In	Night Out
No. 8—Market Street								
Layover—Ferry to	1.45		1.50		0.90		1.60	
Eighteenth and Castro	25.10	20.10	21.85	21.30	27.10	29.55	15.15	16.65
Caselli Avenue	6.08	.....	.....	.....	6.25	5.00	.....	.....
Total	**31.18**	**20.10**	**21.85**	**21.30**	**33.35**	**34.55**	**15.15**	**16.65**
Present Schedule Allowance	**27.00**	**22.00**	**22.00**	**22.00**	**28.00**	**29.00**	**17.00**	**17.00**
No. 9—Valencia Street								
Layover—Ferry to	1.55		1.00		0.65		1.35	
Market and Valencia	18.55	16.95	15.90	17.40	21.50	24.30	11.75	12.25
Sixteenth and Valencia	2.35	2.45	2.55	2.50	2.40	2.75	2.10	2.70
Twenty-ninth and Mission	8.80	6.85	8.75	6.60	7.80	8.60	7.50	7.20
Twenty-ninth and Noe	5.15	1.90	2.80	2.55	2.95	3.17	2.45	2.65
Total	**34.85**	**28.15**	**30.00**	**29.05**	**34.65**	**38.82**	**23.80**	**24.80**
Present Schedule Allowance	**30.00**	**30.00**	**30.00**	**30.00**	**32.00**	**32.00**	**25.00**	**25.00**
No. 10—Guerrero Street and Sunnyside								
Layover—Ferry to	1.50		2.30		2.75		5.00*	
Fifth and Mission	7.90	7.70	7.20	8.90	7.20	10.00	8th-Mkt. to	
Sixteenth and Guerrero	10.05	9.55	10.20	8.15	10.90	12.00	6.80	6.75
Twenty-second and Guerrero	4.75	3.30	3.30	5.40	4.30	3.95	4.10	3.00
Monterey and Diamond	11.55	11.60	10.05	12.40	9.35	13.50	8.55	11.55
Monterey and Gennessee	5.88	6.63	5.60	6.30	6.00	6.58	5.00	4.00
Total	**40.13**	**38.78**	**36.35**	**41.15**	**37.75**	**46.03**	**24.45**	**25.30**
Present Schedule Allowance	**38.00**	**37.00**	**38.00**	**40.00**	**41.00**	**43.00**	**25.00**	**27.00**

*Night Terminal—Eighth and Market. Layover made at that point.

RUNNING TIME—(Continued)

Point	A. M. Rush In	A. M. Rush Out	Mid-Day In	Mid-Day Out	P. M. Rush In	P. M. Rush Out	Night In	Night Out
No. 11—Mission and Twenty-fourth Streets								
Layover—Ferry to	1.60		3.05		2.65		3.75	
Fifth and Mission	7.50	8.45	6.90	7.85	8.65	9.95	6.05	4.65
Sixteenth and Mission	8.50	7.95	8.15	8.70	8.80	8.70	6.80	7.10
Twenty-second and Mission	4.00	4.00	4.55	4.30	3.60	5.70	2.30	5.20
Twenty-fourth and Castro	7.20	4.55	7.10	5.20	7.10	6.30	6.80	4.60
Twenty-fourth and Hoffman	2.55	2.40	1.90	2.25	2.45	2.20	1.40	2.35
Total	**29.75**	**27.35**	**28.60**	**28.30**	**30.60**	**32.85**	**23.35**	**23.90**
Present Schedule Allowance	**29.00**	**30.00**	**29.00**	**30.00**	**29.00**	**30.00**	**25.00**	**26.00**
No. 12—Mission Street and Ingleside								
Layover—Ferry to	2.40		3.15		3.30		5.80*	
Fifth and Mission	7.50	8.30	6.95	8.35	9.45	9.60	5th-Mkt. to	
Sixteenth and Mission	8.00	7.85	7.95	8.35	8.00	9.55	5.85	7.10
Twenty-second and Mission	5.00	3.30	4.45	3.35	4.40	5.55	3.35	3.55
Twenty-ninth and Mission	3.80	4.70	5.20	5.00	4.80	5.45	4.40	4.50
Onondaga and Mission	9.65	8.20	9.30	6.90	8.60	10.35	8.40	7.55
Nineteenth and Sloat	13.20	8.90	11.40	11.70	12.06	11.15	9.94	9.88
Great Highway and Sloat Boulevard	5.80	4.00	6.05	4.90	6.00	4.50	5.44	4.50
Total	**52.95**	**45.25**	**51.30**	**48.55**	**53.31**	**56.15**	**37.38**	**37.08**
Present Schedule Allowance	**51.50**	**49.50**	**51.50**	**51.00**	**51.50**	**54.50**	**43.00**	**42.00**

*Night Terminal—Fifth and Market. Layover made at that point

RUNNING TIME—(Continued)

Point	A. M. Rush In	A. M. Rush Out	Mid-Day In	Mid-Day Out	P. M. Rush In	P. M. Rush Out	Night In	Night Out
No. 14—Mission Street and Daly City								
Layover—Ferry to	2.05		2.85		4.55		7.45	
Fifth and Mission	7.30	8.25	7.00	8.65	6.60	8.65	4.00	5.30
Sixteenth and Mission	8.75	7.45	8.20	9.00	9.75	7.75	7.17	6.70
Twenty-ninth and Mission	9.10	8.35	9.20	8.25	8.55	11.55	6.94	9.25
Onondaga and Mission	9.90	8.35	8.65	8.50	8.70	10.05	8.21	7.45
Geneva and Mission	0.85	2.45	1.15	2.70	2.00	1.45	1.88	1.10
San Jose and Mission	6.90	4.00	5.95	4.00	4.90	7.17	4.75	5.55
Total	**42.80**	**38.85**	**40.15**	**41.10**	**40.50**	**46.62**	**32.95**	**35.35**
Present Schedule Allowance	**42.00**	**39.50**	**42.00**	**42.00**	**45.50**	**45.50**	**37.50**	**37.50**
No. 15—Kearny Street and North Beach								
Layover—S. P. Depot to	3.95		3.70		2.30		7.70	
Third and Market	6.10	6.35	5.35	5.45	6.45	8.50	3.75	5.35
Kearny and Broadway	5.85	6.60	6.15	7.55	8.20	6.05	6.25	4.15
Columbus and Powell	3.20	4.55	3.35	3.70	3.65	2.35	2.90	2.95
Embarcadero and Powell	4.75	1.95	4.20	2.40	3.60	3.31	3.65	2.55
Total	**19.90**	**19.45**	**19.05**	**19.10**	**21.90**	**20.21**	**16.55**	**15.00**
Present Schedule Allowance	**20.50**	**20.50**	**20.50**	**20.50**	**20.50**	**20.50**	**17.00**	**17.00**
No. 16—Third and Kearny Streets								
Layover—Ferry to	3.75		2.50		3.25		7.50	
Kearny and Broadway	6.17	5.58	5.10	5.50	4.75	6.50	6.17	2.83
Third and Market	4.90	7.30	6.20	7.40	5.55	8.90	2.65	7.65
Third and Townsend	5.35	6.50	7.55	5.85	6.95	5.65	3.60	4.15
Third and Eighteenth	7.30	8.95	6.80	5.80	6.85	5.60	6.20	4.50
Third and Wilde	18.50	16.70	15.75	16.70	17.00	17.05	13.75	15.07
Visitacion Valley	6.67	8.00	3.20	4.10	3.75	4.88	2.92	4.00
Total	**48.89**	**53.03**	**44.60**	**45.35**	**44.85**	**48.58**	**35.29**	**38.20**
Present Schedule Allowance	**43.50**	**43.50**	**43.50**	**43.50**	**43.50**	**43.50**	**39.00**	**39.00**

RUNNING TIME—(Continued)

Point	A. M. Rush		Mid-Day		P. M. Rush		Night	
	In	Out	In	Out	In	Out	In	Out
No. 17—Haight Street and Ingleside								
Layover—Ferry to	0.95		0.95		0.65		0.90	
Haight and Gough	19.60	15.70	16.25	16.50	19.80	24.45	11.80	12.10
Haight and Fillmore	3.45	2.60	2.90	2.95	3.00	3.35	2.60	3.05
Haight and Stanyan	7.95	8.00	6.75	8.05	7.40	8.15	6.90	7.50
Twentieth and Lincoln Way	9.45	5.15	9.50	5.70	8.35	9.05	6.80	7.80
Twentieth and Taraval	7.38	7.25	6.90	7.40	7.58	7.75	7.10	5.90
Nineteenth and Sloat Boulevard	3.50	2.75	3.10	2.70	2.92	2.33	2.20	2.70
Total	**51.33**	**41.45**	**45.40**	**43.30**	**49.05**	**55.08**	**37.40**	**39.05**
Present Schedule Allowance	**47.00**	**46.00**	**45.50**	**46.00**	**49.00**	**48.00**	**40.00**	**40.00**
No. 18—Mission Street and Daly City								
Layover—Fifth and Market to	3.00		5.95		3.85		4.50	
Fifth and Mission	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Sixteenth and Mission	8.65	7.65	8.30	8.00	9.60	8.30	7.10	6.25
Twenty-ninth and Mission	9.35	8.20	9.65	8.20	8.45	10.55	6.78	9.50
Onondaga and Mission	8.85	7.85	9.25	8.80	8.40	10.85	8.00	8.75
Geneva and Mission	2.25	2.40	1.10	2.75	1.80	1.55	1.94	0.85
San Jose and Mission	7.05	4.00	6.05	3.80	5.40	6.55	4.06	5.95
Total	**36.65**	**30.60**	**34.85**	**32.05**	**34.15**	**38.30**	**28.38**	**31.80**
Present Schedule Allowance	**34.50**	**32.00**	**34.50**	**34.50**	**36.00**	**36.00**	**32.00**	**32.00**

RUNNING TIME—(Continued)

Point	A. M. Rush In	A. M. Rush Out	Mid-Day In	Mid-Day Out	P. M. Rush In	P. M. Rush Out	Night In	Night Out
No. 19—Ninth-Larkin and Polk Streets								
Layover—Ninth and Brannan to	1.45		2.45		3.20		2.60	
Ninth and Market	3.95	7.25	4.25	4.30	3.20	6.25	3.25	4.15
McAllister and Larkin	2.80	1.00	2.25	1.25	2.35	1.60	2.50	1.40
Sutter and Polk	3.60	5.10	3.05	5.40	4.25	5.40	3.50	4.15
Pacific and Polk	3.90	2.40	4.55	2.60	4.05	3.80	3.55	3.65
North Point and Polk	4.35	4.35	3.65	4.85	4.20	4.40	4.10	3.85
Total	**18.60**	**20.10**	**17.75**	**18.40**	**18.05**	**21.45**	**16.90**	**17.20**
Present Schedule Allowance	**19.00**	**19.00**	**19.00**	**19.00**	**19.00**	**19.00**	**18.00**	**18.00**
No. 20—Fourth-Ellis and O'Farrell Streets								
Layover—S. P. Depot to	2.00		3.95		2.25		5.00	
Fourth and Market	5.45	6.75	5.45	5.90	6.10	8.60	4.10	5.25
Larkin	4.25	3.95	4.85	4.65	5.50	5.50	5.75	4.00
Fillmore	6.25	4.50	4.45	5.15	5.15	5.10	3.75	4.70
Oak and Divisadero	5.55	5.90	5.80	5.15	4.65	6.75	4.60	4.95
Haight and Stanyan	5.65	4.35	5.40	4.50	5.20	5.25	4.65	4.20
Total	**27.15**	**25.45**	**25.95**	**25.35**	**26.60**	**31.20**	**22.85**	**23.10**
Present Schedule Allowance	**27.00**	**28.00**	**27.00**	**28.00**	**27.00**	**28.00**	**25.50**	**26.00**
No. 21—Hayes Street								
Layover—Ferry to	1.45		1.40		0.55		1.25	
Hayes and Larkin	15.05	13.25	13.55	13.70	17.15	21.70	9.00	10.15
Hayes and Fillmore	5.45	4.00	5.95	4.65	4.80	5.05	5.30	4.20
Fulton and Stanyan	8.65	7.75	8.05	8.90	7.75	9.10	6.35	8.80
Eighth and Fulton	3.00	3.60	3.15	2.05	2.85	2.90	4.20	2.50
Eighth and Clement	3.60	2.33	3.50	3.25	3.35	2.95	2.25	3.05
Total	**35.75**	**30.93**	**34.20**	**32.55**	**35.90**	**41.70**	**27.10**	**28.70**
Present Schedule Allowance	**34.00**	**33.00**	**34.00**	**34.00**	**35.00**	**36.00**	**30.00**	**30.00**

RUNNING TIME—(Continued)

Point	A. M. Rush In	A. M. Rush Out	Mid-Day In	Mid-Day Out	P. M. Rush In	P. M. Rush Out	Night In	Night Out
No. 22—Fillmore and Sixteenth Streets								
Layover—Broadway and Fillmore to	4.50		3.25		3.85		3.85	
Sutter and Fillmore	3.20	4.90	3.70	4.95	3.75	4.75	3.40	4.30
McAllister and Fillmore	4.60	4.65	4.60	4.80	4.30	4.90	4.95	4.10
Haight and Fillmore	3.70	3.85	3.95	3.70	3.85	3.75	3.20	4.00
Sixteenth and Mission	6.95	8.35	6.35	8.25	6.70	7.95	5.45	7.55
Sixteenth and Bryant	3.80	3.30	4.40	3.10	5.35	3.05	6.05	2.90
Eighteenth and Third	8.33	8.81	9.33	6.38	8.50	7.88	7.88	6.67
Twenty-third and Third	2.83	2.67	2.33	2.67	2.38	3.75	2.17	2.75
Total	**33.41**	**36.53**	**34.66**	**33.85**	**34.83**	**36.03**	**33.10**	**32.27**
Present Schedule Allowance	**36.00**	**36.00**	**36.00**	**36.00**	**36.00**	**36.00**	**33.00**	**33.00**
No. 23—Fillmore and Valencia Streets								
Richland and Andover to Twenty-ninth and Mission	7.20	7.20	5.65	5.85	7.75	5.95	6.30	4.45
Sixteenth and Valencia	8.15	9.00	7.50	8.60	8.65	8.20	7.30	7.55
Haight and Gough	3.55	3.65	2.90	4.35	3.20	4.20	2.85	3.40
Fillmore and McAllister	6.55	5.25	6.55	5.05	6.15	4.65	5.75	4.40
Fillmore and Sutter	4.10	4.50	3.40	5.20	3.80	5.45	3.60	4.30
Sacramento and Divisadero	4.90	3.20	5.55	2.65	4.75	3.80	3.55	3.95
Total	**34.45**	**32.80**	**31.55**	**31.70**	**34.30**	**32.25**	**29.35**	**28.05**
Present Schedule Allowance	**32.00**	**32.00**	**32.00**	**32.00**	**32.00**	**32.00**	**29.00**	**29.00**

RUNNING TIME—(Continued)

Point	A. M. Rush In	A. M. Rush Out	Mid-Day In	Mid-Day Out	P. M. Rush In	P. M. Rush Out	Night In	Night Out
No. 24—Mission and Richmond								
Layover—Sixth and Fulton to	0.90		0.80		0.35		2.95	
Sacramento and Divisadero	11.30	14.35*	11.25	14.50*	12.15	13.95*	12.95	12.85
McAllister and Divisadero	6.05	5.05	5.45	5.15	5.75	5.60	5.55	4.50
Haight and Fillmore	5.20	6.05	4.90	6.15	5.45	6.05	4.95	5.44
Sixteenth and Mission	7.35	6.50	6.80	6.55	7.15	7.40	7.00	6.50
Twenty-ninth and Mission	9.45	8.40	10.10	9.45	10.50	10.75	9.95	7.33
Cortland and Folsom	4.75	6.55	6.20	6.40	5.10	8.35	4.60	6.44
Total	**44.10**	**46.90**	**44.70**	**48.20**	**46.10**	**52.10**	**45.00**	**43.06**
Present Schedule Allowance	**44.00**	**45.00**	**44.00**	**45.00**	**44.00**	**45.00**	**42.50**	**44.00**
*Also includes layover taken at Eighth Avenue and Fulton Street.								
No. 25—San Bruno Avenue								
Layover—Fifth and Market Streets	4.30		4.50		4.20		4.20	
Fifth and Bryant	5.60	2.55	3.95	3.20	3.50	4.05	3.05	3.10
Ninth and Bryant	2.50	4.55	3.60	3.00	3.40	3.00	2.45	2.50
Sixteenth and Bryant	2.60	3.30	2.80	3.50	2.50	3.10	2.45	2.60
Twenty-fourth and Bryant	5.00	4.95	4.75	5.15	5.50	4.40	4.15	3.65
Army and San Bruno	3.05	2.45	3.15	2.45	2.90	3.65	3.25	2.35
Third and Wilde	10.85	12.70	9.55	12.80	11.25	12.65	8.50	9.45
Visitacion Valley	7.21	.....	.....	.....	4.95	5.35	.....	.....
Total	**36.81**	**30.50**	**27.80**	**30.10**	**34.00**	**36.20**	**23.85**	**23.65**
Present Schedule Allowance	**33.50**	**30.00**	**30.00**	**30.00**	**33.50**	**33.50**	**28.00**	**28.00**

RUNNING TIME—(Continued)

Point	A. M. Rush In	A. M. Rush Out	Mid-Day In	Mid-Day Out	P. M. Rush In	P. M. Rush Out	Night In	Night Out
No. 26—Guerrero Street and Daly City								
Layover—Ferry to	1.50		2.30		2.75		5.00*	
Fifth and Mission	7.90	7.70	7.20	8.90	7.20	10.00	8th-Mkt. to	
Sixteenth and Guerrero	10.05	9.55	10.20	8.15	10.90	12.00	6.80	6.75
Twenty-second and Guerrero	4.75	3.30	3.30	5.40	4.30	3.95	4.10	3.00
Monterey and Diamond	11.55	11.60	10.05	12.40	9.35	13.50	8.55	11.55
San Jose and Ocean	4.66	3.70	4.80	4.00	3.88	6.38	4.00	3.20
San Jose and Mission	7.33	6.75	7.30	7.10	7.50	7.38	6.10	6.80
Total	**46.24**	**42.60**	**42.85**	**45.95**	**43.13**	**53.21**	**29.55**	**31.30**
Present Schedule Allowance	**45.00**	**45.00**	**45.00**	**47.00**	**48.00**	**50.00**	**33.00**	**35.00**
No. 27—Bryant Street								
Layover—Second and Market Streets	2.75		4.00		4.75			
Second and Bryant	3.90	4.00	3.30	4.65	3.40	3.55		
Fifth Street	3.80	2.45	3.55	2.20	3.45	3.10		
Ninth and Bryant	3.80	3.50	3.85	3.20	3.60	3.65		
Sixteenth and Bryant	2.80	3.50	2.55	3.70	2.10	3.55		
Twenty-sixth and Bryant	7.30	5.00	6.35	5.75	6.50	4.70		
Twenty-sixth and Mission	3.30	3.20	3.80	3.00	3.50	3.00	2.85	2.65
Total	**24.90**	**21.65**	**23.40**	**22.50**	**22.55**	**21.55**	**2.85**	**2.65**
Present Schedule Allowance	**25.00**	**24.00**	**25.00**	**24.00**	**25.00**	**24.00**	.....	.....
No. 28—Harrison Street and Depots								
Layover—Ferry to	2.80		2.70		2.30		2.90	
Second and Bryant	7.20	6.75	7.20	6.40	5.70	6.95	5.95	5.75
S. P. Depot	2.25	3.35	2.20	3.00	2.55	3.55	2.55	2.70
Total	**9.45**	**10.10**	**9.40**	**9.40**	**8.25**	**10.50**	**8.50**	**8.45**
Present Schedule Allowance	**11.00**	**11.00**	**11.00**	**11.00**	**11.00**	**11.00**	**11.00**	**11.00**

*Night terminal—Eighth and Market. Layover made at that point.

RUNNING TIME—(Continued)

Point	A. M. Rush In	A. M. Rush Out	Mid-Day In	Mid-Day Out	P. M. Rush In	P. M. Rush Out	Night In	Night Out
No. 29—Kearny Street and Broadway								
Layover—Broadway and Davis to	5.13		3.50		4.25		12.50	
Broadway and Kearny	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Third and Market	4.90	7.30	6.20	7.40	5.55	8.90	2.65	7.65
Third and Townsend	5.35	6.50	7.55	5.85	6.95	5.65	3.60	4.15
Third and Eighteenth	7.30	8.95	6.80	5.80	6.85	5.60	6.20	4.50
Third and Wilde	18.50	16.70	15.75	16.70	17.00	17.05	13.75	15.07
Total	**38.05**	**41.45**	**38.30**	**37.75**	**38.35**	**39.20**	**28.20**	**33.37**
Present Schedule Allowance	**36.00**	**36.00**	**36.00**	**36.00**	**36.00**	**36.00**	**32.50**	**32.50**
No. 30—Eighth and Army Streets								
Layover—Eighth and Market to	6.60		8.10		5.80		4.20	
Eighth and Bryant	2.50	5.20	3.55	3.75	2.90	3.50	2.94	3.28
Sixteenth and Bryant	4.25	3.60	4.90	3.85	3.55	4.35	2.72	3.00
Eighteenth and Third	9.00	7.95	8.10	8.05	8.90	7.15	8.40	5.78
Third and Army	5.10	5.22	4.85	5.10	4.75	5.75	3.95	4.81
Potrero and Army	4.10	4.06	4.25	3.90	4.45	3.30	3.10	3.00
Twenty-fourth and Howard	6.30	5.06	5.95	4.95	5.60	5.30	6.00	4.88
Twenty-second and Mission	1.75	1.89	2.25	2.10	2.30	2.35	2.06	2.00
Total	**33.00**	**32.98**	**33.85**	**31.70**	**32.45**	**31.70**	**29.17**	**26.75**
Present Schedule Allowance	**35.00**	**35.00**	**35.00**	**35.00**	**35.00**	**35.00**	**30.00**	**30.00**

RUNNING TIME—(Continued)

Point	A. M. Rush In	A. M. Rush Out	Mid-Day In	Mid-Day Out	P. M. Rush In	P. M. Rush Out	Night In	Night Out
No. 32—Hayes and Oak Streets								
Layover—Ferry to	1.45		1.10		0.55			
Hayes and Larkin	13.55	12.80	13.40	13.90	16.45	19.00		
Hayes and Fillmore	5.55	4.15	5.85	4.15	5.30	4.90		
Haight and Stanyan	8.25	7.30	8.15	6.50	9.55	7.33		
	27.35	.....	.....	.....	.....	31.23		
Page and Masonic	6.00	.....	.....	.....	.....	6.50		
Ninth Avenue and Judah	11.75	.....	.....	.....	.....	9.42		
Total	**36.85**	**24.25**	**27.40**	**24.55**	**31.30**	**39.82**		
Present Schedule Allowance to								
Ninth and Judah	**36.00**	.....	.....	.....	.....	**38.00**		
Haight and Stanyan	**27.50**	**26.50**	**27.50**	**27.50**	**29.50**	**29.50**		
No. 33—Eighteenth Street and Park								
Layover—Third and Harrison to	1.05		1.35		2.10		1.80*	
Eighth and Harrison	3.45	4.10	3.60	3.50	5.00	4.10	8th-H'rison to	
Fourteenth and Folsom	3.30	3.30	3.15	2.90	2.90	2.80	3.10	2.50
Fourteenth and Mission	1.60	0.75	1.05	2.00	1.10	1.95	1.15	1.50
Eighteenth and Castro	6.95	6.40	6.75	6.95	6.35	9.05	4.85	7.80
Frederick and Ashbury	9.45	8.65	9.20	9.25	9.15	10.75	8.50	8.25
Waller and Stanyan	3.70	2.15	3.75	1.80	3.45	2.25	3.50	1.85
Total	**28.45**	**25.35**	**27.50**	**26.40**	**27.95**	**30.90**	**21.10**	**21.90**
Present Schedule Allowance	**27.00**	**28.00**	**27.00**	**28.00**	**27.00**	**28.00**	**21.00**	**21.00**

*Night Terminal at 8th and Harrison—Layover taken at that point.

RUNNING TIME—(Continued)

Point	A. M. Rush In	A. M. Rush Out	Mid-Day In	Mid-Day Out	P. M. Rush In	P. M. Rush Out	Night In	Night Out
No. 34—Sixth and Sansome Streets								
Layover—Sixth and Brannan to	5.50		3.90		4.05		.....	.....
Sixth and Market	3.75	5.65	3.90	6.20	4.40	6.15	.....	.....
Post and Taylor	3.80	3.50	3.30	4.65	4.75	5.75	.....	.....
Post and Kearny	2.80	3.25	5.00	4.35	5.25	5.40	.....	.....
Bush and Sansome	3.50	3.30	4.55	3.10	4.50	3.20	.....	.....
Embarcadero and Sansome	5.90	6.35	6.45	7.05	6.95	5.17	.....	.....
Total	**19.75**	**22.05**	**23.20**	**25.35**	**25.85**	**25.67**	.....	.....
Present Schedule Allowance	**22.00**	**22.00**	**22.00**	**22.00**	**22.00**	**22.00**	**19.00**	**19.00**
No. 35—Howard Street								
Layover—Ferry to	2.80		2.95		2.80		2.50	
Third and Howard	6.00	4.75	5.50	5.95	6.00	6.05	4.30	4.05
Ninth and Howard	6.95	5.55	6.00	5.95	6.90	6.45	4.00	3.45
Sixteenth and Howard	4.00	4.20	3.60	3.90	3.95	4.65	3.05	3.90
Twenty-fourth and Howard	4.55	4.70	5.55	3.90	4.30	5.85	3.30	4.10
Twenty-fourth and Bryant	3.90	2.20	2.70	3.00	2.90	2.25	3.05	2.15
Twenty-fourth and Rhode Island	2.45	4.45	3.00	5.00	3.20	4.30	3.05	3.20
Total	**27.85**	**25.85**	**26.35**	**27.70**	**27.25**	**29.55**	**20.75**	**20.85**
Present Schedule Allowance	**28.00**	**23.50**	**28.00**	**28.00**	**28.00**	**28.00**	**23.00**	**23.00**

RUNNING TIME—(Continued)

Point	A. M. Rush In	A. M. Rush Out	Mid-Day In	Mid-Day Out	P. M. Rush In	P. M. Rush Out	Night In	Night Out
No. 36—Folsom Street								
Layover—Ferry to	2.10		8.60		3.20		3.80	
Third and Folsom	6.30	6.10	6.30	5.95	5.40	6.05	6.75	4.45
Ninth and Folsom	6.95	4.70	6.45	4.55	5.45	5.00	3.45	5.05
Sixteenth and Folsom	3.75	3.85	3.05	3.80	3.65	3.60	3.40	3.05
Twenty-fourth and Folsom	4.50	5.20	3.45	6.80	4.55	5.15	4.15	4.61
Precita and York	5.50	6.60	5.80	6.25	4.25	3.80	1.90	2.11
Total	**27.00**	**26.45**	**25.05**	**27.35**	**23.30**	**23.60**	**19.65**	**19.27**
Present Schedule Allowance	**25.50**	**25.50**	**25.50**	**25.50**	**25.50**	**25.50**	**20.00**	**20.00**
No. 40—San Mateo								
Layover—Fifth and Market to	5.90		6.40		7.30		15.95	
Ninth and Mission	4.65	5.15	4.50	4.80	2.75	6.35	3.25	3.66
Sixteenth and Mission	4.80	3.90	4.65	3.95	6.05	3.70	3.30	3.50
Twenty-ninth and Mission	8.00	7.85	9.10	8.50	9.35	9.10	9.00	6.69
Onondaga and Mission	8.70	7.45	8.20	7.95	8.70	9.85	6.55	7.86
Geneva and Mission	1.35	1.25	1.30	0.70	0.90	2.00	0.94	1.90
San Jose and Mission	5.05	5.75	4.50	5.60	4.55	7.20	4.06	5.13
Total	**32.55**	**31.35**	**32.25**	**31.50**	**32.30**	**38.20**	**27.10**	**28.74**
Present Schedule Allowance	**31.00**	**31.00**	**31.00**	**31.00**	**31.00**	**31.00**	**31.00**	**31.00**

RUNNING TIME—(Continued)

Point	A. M. Rush In	A. M. Rush Out	Mid-Day In	Mid-Day Out	P. M. Rush In	P. M. Rush Out	Night In	Night Out
Fillmore Street Hill								
Layover—Broadway and Fillmore to	3.35		3.45		3.45		3.45	
Chestnut and Fillmore	5.65	4.35	3.90	5.70	4.85	6.00	5.00	4.25
Marina Boulevard and Fillmore	2.50	1.88	2.25	1.75	1.88	2.00	2.13	1.88
Total	**8.15**	**6.23**	**6.15**	**7.45**	**6.73**	**8.00**	**7.13**	**6.13**
Present Schedule Allowance	**7.00**	**6.00**	**7.00**	**6.00**	**7.00**	**6.00**	**6.50**	**6.00**
Washington and Jackson Streets Cable								
Layover—Powell and Market to	2.50		2.50		3.15		3.00	
Sutter and Powell	3.70	2.15	4.00	2.30	3.80	3.20	2.65	2.50
Powell and California	2.30	1.75	2.30	1.70	2.10	2.70	1.75	2.65
Polk Street	7.00	6.70	7.35	7.10	7.50	8.00	6.60	7.50
Fillmore Street	5.10*	5.60†	5.05*	6.80†	5.00*	4.90†	5.40*	4.80†
Total	**18.10**	**16.20**	**18.70**	**17.90**	**18.40**	**18.80**	**16.40**	**17.45**
Present Schedule Allowance‡	**16.50**	**18.50**	**16.50**	**18.50**	**16.50**	**18.50**	**16.50**	**18.50**

*In Bound Time from Washington and Fillmore Streets.
†Out Bound Time to Jackson and Fillmore Streets.
‡Schedule Allowance to and from Washington and Fillmore Streets.

RUNNING TIME—(Continued)

Point	A. M. Rush In	A. M. Rush Out	Mid-Day In	Mid-Day Out	P. M. Rush In	P. M. Rush Out	Night In	Night Out
Powell and Mason Streets Cable								
Layover—Powell and Market to	2.35		2.15		2.45		1.95	
Powell and Sutter	3.25	2.95	3.15	4.25	3.70	4.70	3.30	2.35
Powell and California	1.75	2.30	2.00	1.35	1.95	2.45	1.83	2.25
Mason and Union	6.05	4.15	6.20	4.45	5.70	5.05	4.89	5.10
Bay and Taylor	3.80	2.70	2.65	2.95	3.10	3.20	2.45	2.95
Total	**14.85**	**12.10**	**14.00**	**13.00**	**14.45**	**15.40**	**12.47**	**12.65**
Present Schedule Allowance	**13.00**	**13.00**	**13.00**	**13.00**	**13.00**	**13.00**	**13.00**	**13.00**
Sacramento and Clay Streets Cable								
Layover—Ferry to	2.20		2.15		2.80		4.60	
Kearny Street	4.10	4.25	4.10	4.35	4.95	5.95	4.60	4.30
Powell Street	3.35	2.55	3.50	2.35	1.65	3.25	1.75	2.35
Sacramento and Polk	5.15	5.20	3.55	6.20	5.55	4.75	4.05	4.75
Sacramento and Fillmore	5.50	5.35	5.95	4.80	4.75	6.50	6.40	3.65
Total	**18.10**	**17.35**	**17.10**	**17.70**	**16.90**	**20.45**	**16.80**	**15.05**
Present Schedule Allowance	**17.00**	**17.00**	**17.00**	**17.00**	**17.00**	**17.00**	**17.00**	**17.00**

RUNNING TIME—(Continued)

ALL CARS ON MARKET STREET

Point	A. M. Rush Inner Track	A. M. Rush Outer Track	Mid-Day Inner Track	Mid-Day Outer Track	P. M. Rush Inner Track	P. M. Rush Outer Track
Inbound—East						
Market and Gough to						
Market and Larkin	3.71	3.67	3.57	3.82	3.63	3.93
Market and Powell	5.06	4.10	5.91	5.13	8.45	5.50
Market and Kearny	4.01	2.75	3.16	2.47	4.23	2.41
Ferry	6.04	6.07	4.79	4.94	5.76	6.20
Total	**18.82**	**16.59**	**17.43**	**16.36**	**22.07**	**18.04**
Present Schedule Allowance	**16.00**	**16.50**	**16.00**	**16.50**	**18.00**	**16.50**
Difference	**+2.82**	**+.09**	**+1.43**	**−.14**	**+4.07**	**+1.54**
Outbound—West						
Ferry to						
Market and Kearny	5.43	5.20	5.87	6.15	9.41	10.84
Market and Powell	2.50	2.05	3.00	2.71	5.25	4.30
Market and Larkin	4.38	3.98	5.22	5.00	6.87	6.17
Market and Gough	1.90	2.21	1.99	2.21	1.80	2.17
Total	**14.21**	**13.44**	**16.08**	**16.07**	**23.33**	**23.48**
Present Schedule Allowance	**16.00**	**16.50**	**16.00**	**16.50**	**18.00**	**16.50**
Difference	**−1.79**	**−3.06**	**+.08**	**−.43**	**+5.33**	**+6.98**
Inbound and Outbound Combined						
Total	**33.03**	**30.03**	**33.51**	**32.43**	**45.40**	**41.52**
Present Schedule Allowance	**32.00**	**33.00**	**32.00**	**33.00**	**36.00**	**33.00**
Difference	**+1.03**	**−2.97**	**+1.51**	**−.57**	**+9.40**	**+8.52**

APPENDIX "C"

ANALYSIS OF PRESENT TRAFFIC AND SERVICE—WEEK DAY MAXIMUM 20 MINUTES

Line	Day and Date	Peak Load Point	Direction	Time	Total Pass.	Cars	Av. Load
1 and 2	Mon.	Sutter & Powell	E	8:40- 9:00 A	1111	13	79
	1/28/29	Sutter & Powell	W	12:00-12:20 P	460	11	42
		Sutter & Powell	W	5:00- 5:20 P	1343	15	90
		Sutter & Powell	W	8:20- 8:40 P	219	6	37
3	Tues.	Sutter & Powell	E	8:20- 8:40 A	505	6	84
	1/29/29	Sutter & Kearny	W	12:00-12:20 P	229	5	46
		Sutter & Powell	W	5:20- 5:40 P	718	7	103
		Sutter & Powell	W	9:20- 9:40 P	105	3	35
4	Mon.	Powell & Eddy	E	8:00- 8:20 A	253	4	63
	2/11/29	Powell & Eddy	W	12:40- 1:00 P	138	4	35
		Powell & Eddy	W	5:20- 5:40 P	525	5	105
		Eddy & Fillmore	W	8:00- 8:20 P	96	3	32
5	Wed.	McAllister & Larkin .	E	8:00- 8:20 A	942	11	86
	2/13/29	McAllister & Larkin .	E	12:00-12:20 P	477	8	60
		McAllister & Larkin .	W	5:40- 6:00 P	1602	13	123
		McAllister & Larkin .	W	9:40-10:00 P	302	5	60
6	Mon.	Haight & Gough	E	8:20- 8:40 A	604	6	101
	2/18/29	Haight & Gough	W	3:00- 3:20 P	164	4	41
		Haight & Gough	W	5:20- 5:40 P	692	6	115
		Haight & Fillmore ..	W	10:00-10:20 P	132	3	44
7 and 17	Tues.	Haight & Gough	E	8:20- 8:40 A	701	8	88
	2/19/29	Haight & Gough	W	3:20- 3:40 P	372	6	62
		Haight & Gough	W	5:20- 5:40 P	947	9	105
		Haight & Fillmore ...	W	10:40-11:00 P	234	5	47
8	Tues.	18th & Castro	E	7:20- 7:40 A	633	8	78
	2/26/29	18th & Castro	E	12:40- 1:00 P	133	7	19
		18th & Castro	W	5:20- 5:40 P	649	9	72
		18th & Castro	E	7:20- 7:40 P	119	4	30
9	Tues.	Market & Valencia ..	E	7:40- 8:00 A	782	10	78
	2/26/29	Market & Valencia ..	W	3:00- 3:20 P	281	7	40
		Market & Valencia ..	W	5:20- 5:40 P	746	9	83
		Market & Valencia ..	E	7:40- 8:00 P	286	5	57
10 and 26	Tues.	5th & Mission	E	7:40- 8:00 A	444	7	63
	3/5/29	16th & Guerrero	W	3:20- 3:40 P	160	4	40
		16th & Guerrero	W	5:20- 5:40 P	571	6	95
		16th & Guerrero	W	10:20-10:40 P	55	3	18
11	Thurs.	16th & Mission	E	7:20- 7:40 A	445	5	89
	3/21/29	16th & Mission	W	2:00- 2:20 P	147	4	37
		16th & Mission	W	5:20- 5:40 P	679	7	97
		16th & Mission	W	8:00- 8:20 P	159	3	53
12	Fri.	16th & Mission	E	7:40- 8:00 A	220	3	73
	3/22/29	5th & Mission	W	3:20- 3:40 P	107	2	54
		16th & Mission	W	4:40- 5:00 P	284	4	71
		16th & Mission	W	9:40-10:00 P	65	2	33

ANALYSIS OF PRESENT TRAFFIC AND SERVICE—WEEK DAY MAXIMUM 20 MINUTES

(Continued)

Line	Day & Date	Peak Load Point	Direction	Time	Total Pass.	Cars	Av. Load
14 and 18	Wed.	16th & Mission	E	7:20- 7:40 A	796	9	88
	3/6/29	16th & Mission	W	3:00- 3:20 P	324	5	65
		16th & Mission	W	5:00- 5:20 P	1129	11	103
		29th & Mission	W	10:00-10:20 P	265	3	88
15	Wed.	3rd & Market	S	7:40- 8:00 A	471	5	94
	1/23/29	3rd & Market	N	2:00- 2:20 P	221	6	37
		3rd & Market	S	4:40- 5:00 P	599	6	100
		3rd & Market	N	10:40-11:00 P	167	5	33
16 and 29	Tues.	3rd & Market	N	7:40- 8:00 A	406	6	68
	1/22/29	3rd & Market	S	3:00- 3:20 P	245	5	49
		3rd & Market	S	5:00- 5:20 P	584	6	97
		3rd & Market	S	10:00-10:20 P	121	3	40
19	Wed.	9th & Market	S	7:40- 8:00 A	709	9	79
	12/26/28	McAllister & Larkin .	N	12:00-12:20 P	196	6	33
		9th & Market	N	5:00- 5:20 P	665	8	83
		Sutter & Polk	S	7:40- 8:00 P	187	6	31
20	Mon.	4th & Market	E	7:20- 7:40 A	540	7	77
	1/7/29	4th & Market	E	12:40- 1:00 P	147	5	29
		O'Farrell & Larkin ..	W	5:20- 5:40 P	678	10	68
		O'Farrell & Fillmore .	W	10:00-10:20 P	88	4	22
21	Thurs.	Hayes & Fillmore ...	E	8:00- 8:20 A	513	6	86
	2/14/29	Hayes & Larkin	E	3:20- 3:40 P	285	5	57
		Hayes & Larkin	W	5:20- 5:40 P	668	7	95
		Hayes & Fillmore ...	W	9:20- 9:40 P	143	3	48
22	Tues.	16th & Mission	S	7:20- 7:40 A	876	8	110
	12/4/28	16th & Mission	N	8:00- 8:20 A	517	8	65
		Fillmore & Haight ..	N	3:20- 3:40 P	330	8	41
		Fillmore & Haight ..	S	3:20- 3:40 P	308	8	39
		16th & Mission	N	5:00- 5:20 P	1176	10	118
		Fillmore & McAllister	N	7:40- 8:00 P	466	6	78
		Fillmore & McAllister	S	7:40- 8:00 P	351	6	59
23	Tues.	16th & Valencia	N	7:40- 8:00 A	141	2	71
	11/27/28	16th & Valencia	S	3:20- 3:40 P	65	2	33
		16th & Valencia	S	5:00- 5:20 P	196	3	65
		16th & Valencia	S	8:20- 8:40 P	43	2	22
24	Tues.	29th & Mission	N&W	7:20- 7:40 A	226	3	75
	12/18/28	29th & Mission	S&E	3:20- 3:40 P	135	3	45
		29th & Mission	S&E	5:20- 5:40 P	231	4	58
		16th & Mission	N	9:40-10:00 P	113	2	57
25	Mon.	24th & Bryant	N	7:20- 7:40 A	337	5	67
	4/1/29	9th & Bryant	S	3:00- 3:20 P	164	4	41
		9th & Bryant	S	5:20- 5:40 P	388	5	78
		24th & Bryant	S	8:20- 8:40 P	72	3	24
27	Thurs.	9th & Bryant	E	7:40- 8:00 A	353	5	71
	4/11/29	16th & Bryant	W	12:00-12:20 P	30	3	10
		16th & Bryant	W	5:00- 5:20 P	559	7	80

ANALYSIS OF PRESENT TRAFFIC AND SERVICE—WEEK DAY MAXIMUM 20 MINUTES

(Continued)

Line	Day & Date	Peak Load Point	Direction	Time	Total Pass.	Cars	Av. Load
28	Thurs.	Ferry	W	7:00- 7:20 A	185	4	46
	4/11/29	2nd & Bryant	E	11:40-12:00 P	56	3	19
		Ferry	E	5:00- 5:20 P	414	6	69
		Ferry	E	8:00- 8:20 P	36	3	12
30	Tues.	Army & Potrero	N	7:20- 7:40 A	491	5	98
	4/16/29	Army & Potrero	N	2:40- 3:00 P	36	1	36
		Army & Potrero	S	4:40- 5:00 P	334	4	84
		24th & Howard	N	10:40-11:00 P	52	2	26
32	Thurs.	Hayes & Fillmore	E	8:00- 8:20 A	140	3	47
	2/14/29	Hayes & Larkin	W	2:20- 2:40 P	34	2	17
		Hayes & Larkin	W	5:20- 5:40 P	169	2	84
33	Wed.	14th & Folsom	E	7:00- 7:20 A	178	3	59
	3/27/29	18th & Castro	W	11:00-11:20 A	79	2	40
		18th & Castro	W	5:40- 6:00 P	248	4	62
		18th & Castro	W	9:00- 9:20 P	67	3	22
34	Thurs.	Post & Taylor	N	7:20- 7:40 A	189	3	63
	1/3/29	6th & Market	S	7:40- 8:00 A	145	3	48
		Post & Kearny	N	1:00- 1:20 P	59	3	20
		Post & Kearny	S	12:00-12:20 P	62	2	31
		Bush & Sansome	S	5:00- 5:20 P	117	4	29
35	Wed.	16th & Howard	E	7:40- 8:00 A	268	4	67
	3/20/29	16th & Howard	W	2:00- 2:20 P	60	4	15
		3rd & Howard	W	5:00- 5:20 P	221	4	55
		24th & Howard	E	8:00- 8:20 P	50	2	25
36	Tues.	16th & Folsom	E	7:20- 7:40 A	260	3	87
	3/26/29	16th & Folsom	W	3:00- 3:20 P	64	2	32
		3rd & Folsom	W	5:00- 5:20 P	192	3	64
		16th & Folsom	W	10:00-10:20 P	32	2	16

APPENDIX "D"

STREET RAILWAY FRANCHISES

Arranged by Streets to Show the
Franchise Number and Date of
Expiration, Together with Notes

Prepared by

JOHN J. O'TOOLE, City Attorney

1929.

STREET RAILWAY FRANCHISE EXPIRATION DATES

Street	Franchise Number	Date of Expiration
Arguello Boulevard		
Euclid Avenue to Clement Street	2781	July 2 or July 9, 1944

In most instances the franchise book shows the date of approval by the Mayor of the particular ordinance granting a franchise. In some instances, of which the above is one, the date of approval is not shown and the recital is merely "passed by the Board of Supervisors." In most such instances the Market Street Railway Company gives the expiration date approximately one week later than date of passage.

Army Street		Ordinance dated
Third to Potrero	Revocable	April 5, 1918
Army Street		
Potrero to Folsom	1698	December 22, 1932
Ashbury Street		
Frederick to Clayton	2306	December 23, 1940
Battery Street		
Market to California	1523	December 14, 1929
Bosworth Street		
Mission to Congo	2904; 105 S. S.	November 28, 1929
Brannan Street	(Same as 1531 and 2291)	
First to Eighth	2306	December 23, 1940

Company claims Sixth to Eighth under Ordinance No. 2469, but it is obvious these two blocks were not built under this franchise.

Broadway		
Embarcadero to Powell	2304	December 23, 1940

No franchise can be found for block on Broadway between Powell and Mason.

Bryant Street		
Sterling to Eighth	2306	December 23, 1940
Eighth to Twenty-sixth	2086	August 2, 1930
Twenty-sixth to Army	2788	August 2, 1930
Bush Street		
Battery to Kearny	1524	November 12, 1929
California Street (Electric)		
Presidio to Maple	2781	July 2 or July 9, 1944
Maple to Arguello	1538	February 17, 1929
Arguello to Sixth Avenue	1537	November 29, 1929

1538 granted to California Street Railroad Company extends time granted by Orders 1489 and 1292. 1537 commences at terminus of California Street Railroad Company's railroad line at First Avenue. Unless Market Street Railway Company succeeded to franchise 1538, it has no franchise covering portion from Maple to Arguello. 1537 granted to individuals, some of whom are named as grantees in 1292. Did Market Street Railway Company succeed to this? Order 1489 would indicate that California Street Railroad Company succeeded to 1292.

California Street (Cable)		
Kearny to Market	1523	November 14, 1929
Carl Street		
Cole to Stanyan	2311	December 29, 1940
Clayton to Cole	3070	March 29 or April 10, 1947
Caselli Avenue		
Corbett to Falcon	2306	December 23, 1940
Castro Street		
Market to Eighteenth	1875	October 9, 1929
Castro (Cable)		
Eighteenth to Twenty-sixth	1875	October 9, 1929
Chattanooga Street		
Twenty-fourth to Twenty-second	2589	December 6, 1942,

STREET RAILWAY FRANCHISE EXPIRATION DATES (Continued).

Street	Franchise Number	Date of Expiration
Chenery Street		
Thirtieth to Glen Park	2306	December 23, 1940
Church Street		
Duboce to Sixteenth	2858	June 3, 1942
For unexpired terms of adjoining franchises. 2541 expires June 3, 1942.		
Clayton Street		
Carl to Frederick	3070	March 29 or April 10, 1947
Waller to Frederick	2723	December 18, 1940
Ashbury to Corbett	2306	December 23, 1940
Corbett to Market—See Caselli		
Clay Street (Cable)		
Larkin to Kearny	1540	November 29, 1929
Kearny to Battery	No Franchise	
Battery to Embarcadero	1882	July 14, 1931
Section from Kearny to Battery was covered by Ordinance No. 1926 with a term of twenty-five years which expired in 1912.		
Clement Street		
Arguello to Thirty-third Avenue	2781	July 2 or July 9, 1944
Columbus Avenue		
Mason to Taylor	1882	July 14, 1931
Connecticut Street		
Seventeenth to Eighteenth	2469	November 18, 1941
Cortland Avenue		
Mission to Folsom	2590	November 28, 1929
Diamond Street		
Chenery to San Jose	2306	December 23, 1940
Divisadero Street		
Page to Jackson	2589	December 6, 1942
Dolores Street		
Twenty-second to Twenty-fourth	2589	December 6, 1942
Duboce Avenue		
Church to Fillmore	2858	June 3, 1942
This is tied into No. 2541 which expires on date above given.		
Eddy Street		
Divisadero to Market	2304	December 23, 1940
Eighteenth Street		
Connecticut to Third	2469	November 18, 1941
Danvers to Guerrero	2306	December 23, 1940
Eighth Avenue		
Fulton to Clement	2781	July 2 or July 9, 1944
Eighth Street		
Market to Folsom	1523	November 14, 1929
Folsom to Harrison	2086	August 2, 1930
Harrison to Bryant	2306	December 23, 1940
Bryant to Brannan	2788	November 10, 1936 (probably)
2788 is for unexpired terms of connecting franchises. Connects with 2086 and 2306. Expiration dates of these given above.		
Ellis Street		
Market to Leavenworth	2065	June 17, 1936
Leavenworth to Divisadero	1890	December 27, 1936
Embarcadero		
Broadway to Market	2304	December 23, 1940
Ferry Loop to Howard	104 S. S.	August 8, 1941
Sacramento to Clay (Cable Loop)	1871	Expired July 14,1911
Over a considerable portion of Embarcadero between Broadway and Market the Municipal Railway and Market Street Railway operate jointly.		

STREET RAILWAY FRANCHISE EXPIRATION DATES (Continued).

Street	Franchise Number	Date of Expiration
Euclid Avenue		
Parker to Arguello	2781	July 2 or July 9, 1944
Falcon Avenue		
Eighteenth to Caselli	2306	December 23, 1940
Fifth Street		
Market to Brannan	1514 and 1676	September 20, 1929
1676 amends 1514 by amending Section I thereof.		
Fillmore Street		
Duboce to Marina	2541	June 3, 1942
First Street		
Brannan to Embarcadero		
No franchise can be found covering this portion.		
Folsom to Market	1523	November 14, 1929
Folsom Street		
Steuart to Second	2086	August 2, 1930
Second to Twenty-sixth	1523	November 14, 1929
Twenty-sixth to Precita	2086	August 2, 1930
1523 covers Folsom Street from First to Army; 2086 granted to same company overlaps one block on either end of 1523.		
Forty-eighth Avenue		
Geary to Point Lobos	2781	July 9, 1944
Fourteenth Street		
Harrison to Guerrero	2306	December 23, 1940
Fourth Street		
Market to Townsend	1523	November 14, 1929
Frederick Street		
Masonic to Ashbury	2312	November 28, 1929
Clayton to Ashbury	2723	December 18, 1940
Frederick Street		
Stanyan to Lincoln Way	2312	November 28, 1929
Fulton Street		
Masonic to Sixth Avenue	1723 1514-1676-2289	September 20, 1929
(Except as noted below.)		
This section is covered by Order No. 1514 amended by 1676 as far west as Stanyan; from Stanyan to First Avenue by 1723; First Avenue to Sixth Avenue by 2289. 2289 is for unexpired terms of 1514 and 1676. 1723 is for forty-seven years from June 29, 1883. Expiration date of whole section September 20, 1929, except for one block, Stanyan to First, which appears to expire June 29, 1930. Evidently term of forty-seven years in 1723 was intended to cover remainder of fifty year term of 1514. May have been delayed several months in passage.		
Fulton Street		
Sixth to Ocean	2304	December 23, 1940
Geary Street		
Thirty-third Avenue to Forty-eighth	2781	July 2 or July 9, 1944
Geneva Avenue		
Mission to San Jose		
(No Franchise—apparently no road)		
Golden Gate Park Private Right of Way—See Lincoln Way		

STREET RAILWAY FRANCHISE EXPIRATION DATES (Continued).

Street	Franchise Number	Date of Expiration
Gough Street		
Market to McAllister	1196	Term 25 Years June 14, 1935
Guerrero Street		
Fourteenth to San Jose	2306	December 23, 1940
Haight Street		
Market to Stanyan	1514-1676	September 20, 1929
Harrison Street		
Steuart to Fourteenth	2306	December 23, 1940
Hayes Street		
Market to Stanyan	1514-1676	September 20, 1929

1514 covers a portion and 1676 which amends Section 1 of 1514 extends over the other portion.

Holly Street		
Mission to Richland	2590	November 28, 1929
Howard Street		
Twenty-sixth to or near the eastern terminus	1532	November 28, 1929

Order No. 104 (Second Series), set out at page 209 of Book of Franchises, purports to grant for a term of forty-three years a franchise for street railroad "commencing at the intersection of the center line of Steuart Street with Howard Street and running thence along and upon Howard Street to East Street, and thence along and upon East Street (subject to the permission of the Board of State Harbor Commissioners) to a point on said East Street opposite the Union Depot (generally known as the Ferry Depot)." The date of the passage of this order is not shown.

Hyde Street		
Ellis to O'Farrell	2978	December 24, 1936

2978 was passed March 23, 1896 "for the unexpired terms of the respective franchises heretofore granted on the streets between which the connections are made as an extension of and adjunct to and in connection with street railroads now owned or operated by the Market Street Railway Company, or for the construction of which it holds franchises." This franchise covers Hyde from Ellis to O'Farrell and out O'Farrell to Scott. The franchises on Ellis Street are 2065 from Leavenworth to Market passed June 17, 1889, forty-seven years, expiring June 17, 1936; 1890 from Ellis and Leavenworth out Ellis to Broderick, fifty years, finally passed December 27, 1886, expiring December 27, 1936.

At the other end of the Hyde-O'Farrell line there is a franchise 2875 covering a short distance "from a connection with the line of the Market Street Railway Company now constructed upon O'Farrell Street from Hyde to Scott Street, at or near the intersection of O'Farrell and Scott Streets, along O'Farrell Street to a connection with the track of said Market Street Railway curving from Divisadero Street and running easterly upon O'Farrell Street to the car house on said last mentioned street between Divisadero and Scott Streets." The term is "for the unexpired term of the respective franchise heretofore granted on the street between which the connections are to be made as an extension of an adjunct to and in connection with the street railroads now owned or operated by the Market Street Railroad Company or for the construction of which it holds franchises."

2311 covers a wandering route and purports to grant a franchise to San Francisco Syndicate and Trust Company for fifty years from December 29, 1890. This covers many streets along and upon which no tracks have been laid and also covers route from Eddy and Hyde Streets along Hyde Street to O'Farrell Street and out O'Farrell to Scott Street.

STREET RAILWAY FRANCHISE EXPIRATION DATES (Continued).

Street	Franchise Number	Date of Expiration

It is impossible to tell definitely whether the section on Hyde Street from Ellis to O'Farrell was built under order No. 2978, limited as to term by 1890, or under the wandering franchise route granted by order No. 2311. Judging from the language used in the particular orders it appears more likely the line was constructed under 2978, the franchise expiring with the expiration of 1890, to-wit: December 27, 1936.

Jackson Street		
Presidio to Fillmore	1882	July 14, 1931
Jackson Street (Cable)		
Steiner to Powell	1882	July 14, 1931
Judah Street (Gough Street Railway)		
Parnassus Avenue to Ninth Avenue	1460	January 23, 1936 Approved January 23, 1911
Kansas Street		
Sixteenth to Seventeenth	2469	November 18, 1941
Kearny Street		
Market to Pacific	1523	November 14, 1929
Pacific to Broadway	2788	November 14, 1929
This is for unexpired term of connecting franchises. Tied into 1523.		
Lake Street		
Arguello to Sixth	2304	December 23, 1940
Larkin Street (Cable)		
Sacramento to Clay	2385	July 14, 1931
La Playa		
Fulton to Balboa	1534 and 1736	November 28, 1929
1736 amends Section I of 1534. Company maintains franchise expires July 9, 1944, but no other franchise can be found for any portion of this street other than as above noted.		
Larkin Street		
Market and Hayes to Post	1525	November 14, 1929
Leavenworth Street		
McAllister to Post	1890	December 27, 1936
Lincoln Way		
Second Avenue to Forty-eighth	1534-1736	November 28, 1929
Market Street (One-half Ownership with Municipal Railway)		
Embarcadero to Sutter	1525	November 14, 1929
Market Street		
Embarcadero to Seventeenth	1514 and 1676	September 20, 1929
Danvers to Clayton	See Falcon Ave.	
Mason Street (Cable)		
Clay to Columbus	1882 and 2385	July 14, 1931
Mason Street		
Turk to Eddy	2311	December 29, 1940
Masonic Avenue		
Page to Frederick	2312	November 28, 1929
Oak to Page	3070	March 27 or April 10, 1947
McAllister Street		
Market to Central	1514-1676	September 20, 1929
Mission Street		
Embarcadero to Twenty-sixth	1531	November 28, 1929
Twenty-sixth to Silver	2291	November 28, 1929
Silver to County Line	2590	November 28, 1929

STREET RAILWAY FRANCHISE EXPIRATION DATES (Continued).

Street	Franchise Number	Date of Expiration
Monterey Boulevard—See Sunnyside		
Montgomery Street		
Post to Washington	1532	November 28, 1929
Nineteenth Avenue (Gough St. Railway)		
Wawona to Sloat Boulevard	288	October 17, 1932
Ninth Street		
Market to Mission	1525	November 14, 1929.
Mission to Brannan	1907	April 14, 1930
Ninth Avenue (Gough St. Railway)		
Judah to Pacheco	1460 For 25 years	January 23, 1936
Oak Street		
Fillmore to Stanyan	1890	December 27, 1936
Ocean Avenue		
Onondaga to Junipero Serra	2904	November 28, 1929
O'Farrell Street		
Hyde to Scott	2978	December 27, 1936
Scott to Divisadero	2875	December 27, 1936

Situation relative to these franchises fully explained under Hyde Street from Ellis to O'Farrell.

Onondaga Avenue		
Mission to Ocean Avenue	2904	November 28, 1929
Otis Street		
Mission to Fourteenth	1531	November 28, 1929
Pacific Avenue		
Polk to Divisadero	1907	April 14, 1930
Page Street		
Fillmore to Masonic	2312	November 28, 1929
Masonic to Clayton	2311	December 29, 1940
Clayton to Stanyan	2407	December 29, 1940

2312 covers Page Street from Gough and Market Streets to Masonic Avenue; expires November 28, 1929; granted to City Railroad Company for unexpired term of 1531 which is November 28, 1929.

2311 was granted to San Francisco Syndicate and Trust Company; finally passed over veto December 29, 1890. Purports to grant franchise for fifty years. This overlaps on 2312 on Page Street from Baker to Masonic. Over this section it is provided as follows:

> "West along Page Street from the right of way and franchise of the City Railroad Company, through an arrangement with and by permission of the City Railroad Company, to the intersection of Clayton Street."

2407 on Page from Clayton to Stanyan was granted to Metropolitan Railway Company, successor in interest to San Francisco Syndicate and Trust Company, unexpired term of 2311.

The portion from Baker to Masonic was evidently not constructed by either of the companies mentioned in 2311 or 2407, and no line on Baker Street was built to connect with Page. Page from Baker to Masonic should be controlled by 2312.

Parker Avenue		
California to Euclid	2781	July 2 or July 9, 1944
Parnassus Avenue		
Stanyan to Fifth Avenue	105 S. S.	November 28, 1929

105 S. S. covers the designated route and was granted in 1898 "for the unexpired terms of the respective franchises heretofore granted and now owned

STREET RAILWAY FRANCHISE EXPIRATION DATES (Continued).

Street	Franchise Number	Date of Expiration

or controlled by the Market Street Railroad Company, on the streets between and on which connections may be made." The route of this section of the franchise starts at Stanyan and Frederick, thence on Stanyan to Parnassus, out Parnassus to Fifth Avenue. 2536 grants to Park and Ocean R. R. Co. beginning on Stanyan opposite Waller, there connecting with tracks of said company on Stanyan Street, thence along Stanyan to Frederick, there connecting with the tracks of the City Railroad Company on Frederick for unexpired terms of Orders 1534 and 1736. 1534 expires November 28, 1929. and 1736 amends Section I thereof. 2312 was granted to City Railroad Company for unexpired term of 1531 and runs on Frederick from Masonic Avenue to First Avenue. 1531 expires November 28, 1929.

It appears, therefore, that under the terms of 105 S. S. the franchise therein granted expires November 28, 1929, whether tied into either 2536 or 2312.

Polk Street		
Post to Sutter	1703	January 3, 1933
Sutter to Union	1525	November 14, 1929
Union to Beach	2310	November 14, 1929
Market to Hayes	1890	December 27, 1936

1703 extends from Post to Market on Polk, although no line built from Post to Hayes. Cannot tell definitely whether portion from Market to Hayes built under 1703 or 1890, but would assume it must be under 1890.

Post Street		
Polk to Larkin	1703	January 3, 1933
Leavenworth to Market	1890	December 27, 1936
Powell Street		
Broadway to Jefferson	1856	June 1, 1931
Powell Street. (Cable)		
Market to Jackson	1856	June 1, 1931
Precita Avenue		
Folsom to Army	1698	December 22, 1932
Presidio Avenue		

Jackson to California—Cannot find any franchise other than 1926 which expired September 27, 1912.

Post to California	2781	July 2 or July 9, 1944
Richland Avenue		
Mission to Andover	2590	November 28, 1929
Sacramento Street		
Fillmore to Divisadero	2385	July 14, 1931
Lake to Divisadero	2304	December 23, 1940
Sacramento Street (Cable)		
Market to Fillmore	1882-1926-2385	July 14, 1931
San Bruno Avenue		
Third Street to County Line	209 S. S.	November 18, 1941
Army to Oakdale	2065	June 17, 1936

Oakdale to Third Street—Cannot find any franchise for this section.

San Jose Avenue		
Guerrero to Thirtieth Street	2306	December 23, 1940
Diamond to County Line	2306	December 23, 1940
Sansome Street		
Market to Jackson	1532	November 28, 1929
Jackson to Chestnut	208 S. S.	November 28, 1929
Second Street		
Market to Howard	1532	November 28, 1929
Howard to Brannan	2065	June 17, 1936

STREET RAILWAY FRANCHISE EXPIRATION DATES (Continued).

Street	Franchise Number	Date of Expiration
Seventeenth Street		
Kansas to Connecticut	2469	November 18, 1941
Sixteenth Street		
Church to Kansas	2541	June 3, 1942
Sixth Avenue		
Lake to Fulton	2304	December 23, 1940
Sixth Street		
Market to Brannan	1524	November 12, 1929

Company has maintained that franchise on Sixth Street from Mission to Brannan does not expire until November 18, 1941, probably under franchise No. 2469. It is evident no line was built over this portion under the last named franchise.

Sloat Boulevard (Gough St. Railway)		
Ocean Avenue to Junipero Serra Boulevard to Ocean	288	October 17, 1932

The greater portion of this route, if not all, lies within private right of way.

Stanyan Street
Fulton to Hayes

Revocable permit granted to United Railroads under order No. 101, approved November 19, 1906.

Company has maintained that franchise over this portion does not expire until 1942. The only orders affecting this portion, other than the revocable permit referred to, are the following:

Order 2535 was granted to Ocean Beach Railway Company June 3, 1892 for fifty years and covered in part Stanyan Street from Fell to Fulton and other streets and finally extending out First Avenue to Point Lobos. There is no line from Fell to Hayes, nor is there any line on First Avenue from Fulton to Point Lobos. Their franchise covered portion on Fulton from Stanyan to First Avenue. It is evident no line over the particular route in question was built under this franchise.

Order 2541 was approved June 3, 1892 and grants to Market Street Cable Railway Company a franchise over various streets and contains the following recital:

> "Also in addition to the new lines above named, to construct, lay down, maintain and operate for the unexpired term of the franchise of said company granted by Orders Nos. 1514, 1676 and 2289 of this board, but subject so far as applicable to all the conditions and restrictions contained in said orders and with similar rights and privileges as those therein conferred, certain extensions to its present lines described in said orders, along and upon the following described streets in the City and County of San Francisco, to-wit:
>
> Commencing at the westerly end of the railroad track of said grantee on D Street, near Seventh Avenue; thence along and upon D Street to the westerly line of Nineteenth Avenue.
>
> Also commencing at the intersection of Fulton Street with Stanyan Street; thence along and upon Stanyan Street to Hayes Street."

If route in question is claimed under this franchise it will expire September 20, 1929.

The revocable permit granted under Ordinance 101 in 1906 is probably the order under which this line was constructed.

Stanyan Street		
Oak to Haight	1890	December 27, 1936
Haight to Waller	1514-1736	November 28, 1929

STREET RAILWAY FRANCHISE EXPIRATION DATES (Continued)

Street	Franchise Number	Date of Expiration
Stanyan Street		
Waller to Parnassus		November 28, 1929
See discussion under Parnassus line.		

The franchise situation covering Stanyan Street from Haight to Parnassus is somewhat complicated. The line on Stanyan Street from Haight to Waller was probably built and operated under 1535 as modified by 1736, and from Waller Street extended through private property to H Street now Lincoln Way and to the ocean. It is also undoubtedly true that the line on Stanyan from Frederick to Parnassus was built under franchise granted by 105 S. S. for the unexpired term of either 2536 or 2312 both of which expire November 28, 1929.

Order 1890 granted to Rose, et al., passed over veto December 27, 1886 grants a franchise on certain streets, for a term of fifty years, which includes section on Stanyan from Oak to Waller. This merely overlaps on earlier franchises with respect to portion from Haight to Waller. The term stated in this franchise would not expire until December 27, 1936.

Order 2449 purports to be supplementary to 1890 and recites that "the right is hereby granted to the Omnibus Cable Company, successors in interest to the aforesaid A. W. Rose and associates, its successors or assigns, to extend its railroad tracks and to maintain and operate its street railroad for the unexpired term of its franchise,***.

Commencing on Stanyan Street, at the intersection of Waller Street and connecting with the tracks of the said Omnibus Cable Company there laid or to be laid; thence along and upon Stanyan Street to Carl Street; thence along and upon Carl Street to First Avenue; thence along and upon First Avenue to and upon H Street."

There is no company line on Carl Street from Stanyan to First Avenue and thence to H Street. Ordinance 123, approved August 21, 1900 (Franchise Book, page 209), permits the abandonment of certain portions of various franchises and includes various franchises on Carl Street from Stanyan to I Street.

Steiner Street		
Jackson to Washington	1882	July 14, 1931
Sterling Street		
Harrison to Bryant	2306	December 23, 1940
Steuart Street		
Howard to Harrison	2306	December 23, 1940
Sunnyside Avenue (Monterey Boulevard)		
Diamond to Gennessee	2904	November 28, 1929
Sutter Street		
Presidio to Sansome	1525	November 14, 1929
Taraval Street		
Twentieth Street to 33rd Ave.; 33rd Ave. to Vicente; thence to 35th Ave.; also 35th Ave. to Sloat Boulevard (Gough Street Railway.)		
	288 25 years	October 17, 1932
Taylor Street		
Golden Gate to Post	208 S. S.	November 12, 1929 or December 27, 1936

This franchise was granted for a connecting line. The language fixing the term is somewhat different from that used in other orders for granting franchises for connecting lines. It reads:

STREET RAILWAY FRANCHISE EXPIRATION DATES (Continued)

Street	Franchise Number	Date of Expiration

"For the unexpired term of the franchises heretofore granted by this board, of the street railroad connecting with the franchises hereinafter described. ***".

The particular line is referred to as follows:

"Commencing at the intersection of Sixth and Market Streets, and connecting with the line of railroad of the Market Street Railway Company on Sixth Street; thence across Market Street to Taylor Street; thence across Taylor Street to its intersection with Post Street, there connecting with the line of railroad of the Market Street Railway Company on Post Street."

The franchise for the Sixth Street line expires November 12, 1929. The franchise for the Post Street line expires December 27, 1936.

While the route laid out commences at Sixth Street and Market Street and runs to Post Street, this may not conclusively determine the extent of the term. The decision more favorable to the company would be the termination of the Post Street franchise on December 27, 1936.

Taylor Street (Cable)		
Columbus to Bay	1882	July 14, 1931
Tenth Street		
Market to Bryant	1890	December 27, 1936,
Third Street		
Burke to Sixteenth Street	2469	November 18, 1941
Market to Berry	1532	November 28, 1929
Berry to Sixteenth Street	2469 and 3091 N.S.	November 18, 1941
Burke to San Bruno Avenue	2469 and 209 S.S.	November 18, 1941

Ordinance No. 3091 N. S. approved January 21, 1915, permits re-routing of line from Berry and Third Streets to Fourth and Third over Third Street bridge to continue for a period of unexpired franchises granted by certain designated orders; revocable by board. If revoked company may reconstruct on street formerly occupied.

Thirtieth Street		
San Jose to Chenery	2306	December 23, 1940
Thirty-fifth Avenue		
Vicente to Sloat—See Taraval		
Thirty-third Avenue		
Clement to Geary	2781	July 2 or July 9, 1944,
Taraval to Vicente—See Taraval Street		
Townsend Street		
Fourth to Third	1532	November 28, 1929
	1523	November 14, 1929

These franchises come from different directions to a point of meeting in front of railroad station.

Turk Street		
Market to Fillmore	1524	November 12, 1929
Fillmore to Divisadero	2541	June 3, 1942
Twelfth Street		
Market to Otis	2312	November 28, 1929,
Twentieth Avenue		
Wawona to Lincoln Way	425 N. S.	May 12, 1933
Twenty-fourth Street		
Hoffman to Dolores	2589	December 6, 1942
Howard to Potrero	1889	December 27, 1929
Potrero to San Bruno	2065	June 17, 1936
San Bruno to Rhode Island. No franchise can be found for this section.		
Twenty-ninth Street		
Mission to Noe	2590	November 28, 1929
Twenty-second Street		
Chattanooga to Howard	2589	December 6, 1942

STREET RAILWAY FRANCHISE EXPIRATION DATES (Continued)

Street	Franchise Number	Date of Expiration
Twenty-sixth Street		
Folsom to Bryant	2113	October 16, 1930
Folsom to Mission	2788	November 14, 1929
Unexpired term of 1523 on Folsom Street which expires November 14, 1929 and 1531 on Mission Street which expires November 28, 1929.		
Valencia Street		
Market to Mission	1514 and 1676	September 20, 1929
Vicente Street		
Thirty-third to Thirty-fifth—See Taraval		
Visitacion Valley Line		
County Line to Mission		
This appears to be on private right of way. No franchise can be found.		
San Bruno to County Line in San Mateo County		
Mainly along private right of way.		
Waller Street		
Clayton to Stanyan	2723	December 18, 1940
Washington Street		
Montgomery to Kearny	1871 and 1882	July 14, 1931
Washington Street (Cable)		
Steiner to Powell	1882	July 14, 1931
Wawona Street		
Twentieth Ave. to Nineteenth Ave.	425 S. S.	May 12, 1933

FRANCHISES IN SAN MATEO COUNTY

(Copy of statement furnished by Market Street Railway Company.)

(The City Engineer's Office advises that an examination of the San Mateo franchises in the company's office seems to support data shown on this sheet.)

Granted by	No.	Date	Term Years	
1. San Mateo County	81	Oct. 6, 1890	49	San Mateo Line
2. San Mateo County	90	June 10, 1891	49	San Mateo Line
3. San Mateo County	172	Apr. 1, 1901	50	San Mateo Line
4. San Mateo County	*180	Jan. 20, 1902	50	San Mateo Line
5. San Mateo County	*267	Dec. 15, 1913	†	San Mateo Line
6. San Mateo City	64	May 7, 1900	50	San Mateo Line
7. San Mateo City	66	June 4, 1900	50	San Mateo Line
8. San Mateo City	75	Dec. 16, 1901	50	San Mateo Line
9. San Mateo City	*77	Feb. 3, 1902	50	San Mateo Line
10. San Mateo County	*227	Sept. 8, 1908	50	Visitacion Valley
11. San Mateo County	185	Feb. 2, 1903	50	So.S.F.R.R.&P.Co.
12. So. San Francisco	*66	Apr. 21, 1913	50	So.S.F.R.R.&P.Co.
13. So. San Francisco	*85	Sept. 7, 1915	50	So.S.F.R.R.&P.Co.

REMARKS

1. On Mission Road, County line to Holy Cross and continuing to road to Cunningham's Hotel.
2. On Mission Road from Cunningham's road to and through San Mateo and to Redwood City.
3. To cross the roads intervening between Holy Cross and San Mateo.
4. On Mission Road from County Line to Holy Cross, thence across and along roads and streets to San Mateo.
5. Mission Street from County Line to Colma and Mission Road to Cypress Lawn relocating and providing new specifications.

6 and 7. Preliminary routes.

8. Present route in San Mateo.
9. Present route in San Mateo confirmation of previous on account of some informality.
10. Present Visitacion Valley line.
11. South San Francisco line to junction with main line—old route to Holy Cross.
12. Present route in South San Francisco.
13. South San Francisco line to junction with main line new route across S. P. near Baden.

* Indicates franchises which seem sufficient for present routes.

† Indeterminate.

APPENDIX "E"

CHRONOLOGICAL SUMMARY

of

FRANCHISE EXPIRATIONS

Based on the City Attorney's Report

APPENDIX "E"

CHRONOLOGICAL SUMMARY

of

FRANCHISE EXPIRATIONS

Based on the City Attorney's Report

SAN FRANCISCO COUNTY

Date of Expiration	Franchise Number	Street
Already Expired or no Franchise on Record		
	None	Broadway-Powell Street to Mason Street.
	1926	Clay Street-Kearny to Battery Street (Expired 1912)
	None	First Street-Brannan Street to Embarcadero
	1926	Sacramento Street-Powell to Battery Street (Expired in 1912)
	None	San Bruno Avenue-Third Street to Oakdale Avenue
	1871	Embarcadero-Clay Street to Sacramento Street (Expired in 1911)
	1926	Presidio Avenue-California Street to Jackson Street (Expired in 1912)
	None	Twenty-fourth Street-San Bruno Avenue to Rhode Island Street
Revocable Permit		
	4559	Army Street-Potrero Avenue to Third Street
	2384	San Bruno Avenue-Ocean Shore Right of Way, South of Army Street
	101	Stanyan Street-Fulton to Hayes Street
1929		
Feb. 17	1538	California Street-Maple Street to Arguello Boulevard
	1292 1538	California Street-Kearny Street to Presidio Avenue
	2175	California Street-Kearny Street to Davis Street
	2058	Hyde Street-Pine Street to Beach Street
	2058	Jones Street-McAllister Street to Bush Street
	2175	Jones Street-Bush Street to Pine Street
	2175	O'Farrell Street-Market Street to Jones Street
	2175	Pine Street-Jones Street to Hyde Street
Sept. 20	1514 1676	Fifth Street-Market Street to Brannan Street
	1514 1676	Fulton Street-Masonic Avenue to Stanyan Street
	2289	Fulton Street, Arguello Boulevard to Sixth Avenue
	1676	Haight Street-Market Street to Stanyan Street
	1676	Hayes Street-Market Street to Stanyan Street
	1514 1676	Market Street-Embarcadero to Castro Street
	1514 1676	McAllister Street-Central Avenue to Market Street
	1514 1676	Valencia Street-Market Street to Sixteenth Street
	1514 1676	Valencia Street-Sixteenth Street to Mission Street
Oct. 9	1875	Castro Street-Eighteenth Street to Twenty-Sixth Street
	1875	Castro Street-Market Street to Eighteenth Street

CHRONOLOGICAL SUMMARY OF FRANCHISE EXPIRATIONS (Continued)

Date of Expiration	Franchise Number	Street
Nov. 12	1524	Bush Street-Battery Street to Kearny Street
	1524	Sixth Street-Market Street to Brannan Street
	208 S. S.	*Taylor Street-Golden Gate Avenue to Post Street
	1524	Turk Street-Mason Street to Fillmore Street
Nov. 14	1523	California Street-Kearny Street to Davis Street
	1523	California Street-Davis Street to Drumm Street. (Non-operative)
	1523	Eighth Street-Market Street to Folsom Street
	1523	First Street-Folsom Street to Market Street
	1523	Folsom Street-Second Street to Sixteenth Street
	1523	Sixteenth Street to Twenty-sixth Street
	1523	Fourth Street-Market Street to Townsend Street
		*This franchise might also be interpreted as expiring Dec. 27, 1936.
Nov. 14	1523	Kearny Street-Market Street to Broadway
	2788	
	1525	Larkin Street-Hayes Street to Post Street
	1525	Market Street-Embarcadero to Sutter Street
	1525	Ninth Street-Market Street to Mission Street
	1525	Polk Street-Sutter Street to North Point Street
	2310	
	1525	Sutter Street-Presidio Avenue to Sansome Street
Nov. 14 or Nov. 28	1523	Townsend Street-Fourth Street to Third Street
	1532	
Nov. 14	2788	Twenty-sixth Street-Mission Street to Folsom Street
Nov. 28	2904	Bosworth Street-Mission Street to Glen Park
	105 S. S.	
	2590	Cortland Avenue-Mission Street to Folsom Street
	2312	Frederick Street-Masonic Avenue to Ashbury Street
	2312	Frederick Street-Stanyan Street to Lincoln Way
	1532	Howard Street-Sixteenth Street to Embarcadero
	1532	Howard Street-Twenty-sixth Street to Sixteenth Street
	1736	La Playa-Fulton Street to Balboa Street
	2590	Leese Street-Mission Street to Richland Avenue
	1534	Lincoln Way-Second Avenue to Forty-eighth Avenue
	1736	
	2312	Masonic Avenue-Page Street to Frederick Street
	1531	Mission Street-County Line to Twenty-sixth Street
	2291	
	2590	
	1531	Mission Street-Twenty-sixth Street to Sixteenth Street
Nov. 28	1531	Mission Street-Sixteenth Street to Embarcadero
	2904	Monterey Boulevard-Diamond Street to Gennessee Street
	2904	Ocean Avenue-Onondaga Avenue to Junipero Serra Boulevard
	2904	Onondaga Avenue-Mission Street to Ocean Avenue
	1531	Otis Street-Mission Street to Fourteenth Street
	2312	Page Street-Masonic Avenue to Fillmore Street
	105 S. S.	Parnassus Avenue-Third Avenue to Judah Street
	105 S. S.	Parnassus Avenue-Stanyan Street to Third Avenue
	1534	Private Right of Way-Lincoln Way to Fulton Street
	1736	(Golden Gate Park)
	2590	Richland Avenue-Mission Street to Andover Street
	1532	Sansome Street-Sutter Street to Chestnut Street
	208 S. S.	

CHRONOLOGICAL SUMMARY OF FRANCHISE EXPIRATIONS (Continued)

Date of Expiration	Franchise Number	Street
	1532	Second Street-Market Street to Howard Street
	1514	Stanyan Street-Haight Street to Parnassus Avenue
	1736	
	105 S. S.	
	1532	Third Street-Market Street to Berry Street
	2312	Twelfth Street-Market Street to Otis Street
	2590	Twenty-ninth Street-Mission Street to Noe Street
Nov. 29	1537	California Street-Arguello Boulevard to Sixth Avenue
	1540	Clay Street-Larkin Street to Kearny Street
Dec. 14	1523	Battery Street-Market Street to California Street
Dec. 27	1889	Twenty-fourth Street-Howard Street to Potrero Avenue
1930		
Apr. 14	1907	Ninth Street-Mission Street to Brannan Street
	1907	Pacific Avenue-Polk Street to Divisadero Street
June 29	1723	Fulton Street-Stanyan Street to Arguello Boulevard
Aug. 2	2086	Bryant Street-Eighth Street to Sixteenth Street
	2086	Bryant Street-Sixteenth Street to Army Street
	2788	
	2086	Eighth Street-Folsom Street to Harrison Street
	2086	Folsom Street-Steuart Street to Second Street
	2086	Folsom Street-Twenty-sixth Street to Precita Avenue
Oct. 16	2113	Twenty-sixth Street-Folsom Street to Bryant Street
1931		
June 1	1856	Powell Street-Broadway to Jefferson Street
	1856	Powell Street-Jackson Street to Market Street
July 14	1882	Clay Street-Battery Street to Embarcadero
	1882	Jackson Street-Presidio Avenue to Fillmore Street
	1882	Jackson Street-Steiner Street to Powell Street
	2385	Larkin Street-Sacramento Street to Clay Street
	1882	Mason Street-Clay Street to Columbus Avenue
	2385	
	1882	Columbus Avenue-Mason Street to Taylor Street
	2385	Sacramento Street-Divisadero Street to Fillmore Street
	2385	Sacramento Street-Fillmore Street to Powell Street
	1882	Sacramento Street, Battery Street to Market Street
	1882	Steiner Street-Jackson Street to Washington Street
	1882	Taylor Street-Columbus Avenue to Bay Street
	1882	Washington Street-Montgomery Street to Kearny Street
	1871	
	1882	Washington Street-Steiner Street to Powell Street
1932		
Oct. 17	288 N.S.	Sloat Boulevard-Junipero Serra Boulevard to Great Highway (See Private Right of Way)
	288 N. S.	Taraval Street-Twentieth Avenue to Thirty-third Avenue
	288 N. S.	Thirty-third Avenue-Taraval Street to Vicente Street
	288 N. S.	Thirty-fifth Avenue-Vicente Street to Sloat Boulevard
	288 N. S.	Nineteenth Avenue-Wawona Street to Sloat Boulevard
	288 N. S.	Junipero Serra Boulevard-Ocean Avenue to Sloat Boulevard (See Private Right of Way)
Dec. 22	1698	Army Street-Folsom Street to Potrero Avenue
	1698	Precita Avenue-Folsom Street to Army Street
1933		
Jan. 3	1703	Polk Street-Post Street to Sutter Street
	1703	Post Street-Polk Street to Larkin Street

CHRONOLOGICAL SUMMARY OF FRANCHISE EXPIRATIONS (Continued)

Date of Expiration	Franchise Number	Street
May 12	425 N. S.	Twentieth Avenue-Wawona Street to Lincoln Way
	425 N. S.	Wawona Street-Nineteenth Avenue to Twentieth Avenue
1935		
June 14	1196	Gough Street-Market Street to McAllister Street
1936		
Jan. 23	1460	Judah Street-Parnassus Avenue to Ninth Avenue
	1460	Ninth Avenue-Judah Street to Pacheco Street
June 17	2065	San Bruno Avenue-Oakdale Avenue to Ocean Shore Right of Way
	2065	Second Street-Howard Street to Brannan Street
	2065	Twenty-fourth Street-Potrero Avenue to San Bruno Avenue
Nov. 10	2788	Eighth Street-Bryant Street to Brannan Street
Dec. 24	2978	Hyde Street-Ellis Street to O'Farrell Street
Dec. 27	2065	Ellis Street-Divisadero Street to Market Street
	1890	
	1890	Leavenworth Street-McAllister Street to Post Street
	1890	Oak Street-Fillmore Street to Stanyan Street
	2875	O'Farrell Street-Divisadero Street to Hyde Street
	2978	
	1890	Polk Street-Market Street to Hayes Street
	1890	Post Street-Leavenworth Street to Market Street
	1890	Stanyan Street-Oak Street to Haight Street
	1890	Tenth Street-Market Street to Bryant Street
1940		
Dec. 18	2723	Clayton Street-Frederick Street to Waller Street
	2723	Frederick Street-Ashbury Street to Clayton Street
	2723	Waller Street-Clayton Street to Stanyan Street
Dec. 23	2306	Ashbury Street-Frederick Street to Clayton Street
	2306	Brannan Street-First Street to Eighth Street
	2304	Broadway-Embarcadero to Powell Street
	2306	Bryant Street-Sterling Street to Eighth Street
	2306	Chenery Street-Thirtieth Street to Glen Park
	2306	Clayton Street-Ashbury Street to Corbett Avenue
	2306	Clayton Street-Corbett Avenue to Market Street
	2306	Diamond Street-Chenery Street to San Jose Avenue
	2304	Eddy Street-Divisadero Street to Market Street
	2306	Eighteenth Street-Danvers Street to Guerrero Street
	2306	Eighth Street-Harrison Street to Bryant Street
	2304	Embarcadero-Broadway to Market Street
	2306	Market Street-Danvers Street to Clayton Street
	2306	Fourteenth Street-Harrison Street to Guerrero Street
	2304	Fulton Street-Sixth Street to La Playa
	2306	Guerrero Street-Fourteenth Street to Sixteenth Street
	2306	Guerrero Street-Sixteenth Street to San Jose Avenue
	2306	Harrison Street-Third Street to Fourteenth Street
	2306	Harrison Street-Steuart Street to Second Street
	2304	Lake Street-Arguello Boulevard to Sixth Avenue
	2304	Sacramento Street-Arguello Boulevard to Divisadero Street
	2306	San Jose Avenue-Diamond Street to County Line
	2306	San Jose Avenue-Guerrero Street to Thirtieth Street
	2304	Sixth Avenue-Lake Street to Fulton Street
	2306	Sterling Street-Harrison Street to Bryant Street
	2306	Steuart Street-Howard Street to Harrison Street
	2306	Thirtieth Street-San Jose Avenue to Chenery Street
Dec. 29	2311	Carl Street-Cole Street to Stanyan Street
	2311	Mason Street-Turk Street to Eddy Street
	2407	Page Street-Stanyan Street to Masonic Avenue
	2311	

CHRONOLOGICAL SUMMARY OF FRANCHISE EXPIRATIONS (Continued)

Date of Expiration	Franchise Number	Street
1941		
Aug. 8	104 S. S.	Embarcadero-Ferry Loop to Howard Street
Nov. 18	2469	Connecticut Street-Seventeenth Street to Eighteenth Street
	2469	Eighteenth Street-Connecticut Street to Third Street
	2469	Kansas Street-Sixteenth Street to Seventeenth Street
	2469 209 S. S.	Third Street-San Bruno Avenue to Burke Street
	209 S. S.	San Bruno Avenue-County Line to Third Street
	2469	Seventeenth Street-Kansas Street to Connecticut Street
	2469	Third Street-Burke Street to Sixteenth Street
	2469 3091	Third Street-Berry Street to Sixteenth Street
1942		
June 3	2858	Church Street-Duboce Avenue to Sixteenth Street
	2858	Duboce Avenue-Fillmore Street to Church Street
	2541	Fillmore Street-Duboce Avenue to Marina Boulevard
	2541	Sixteenth Street-Church Street to Kansas Street
	2541	Turk Street-Fillmore Street to Divisadero Street
Dec. 6	2589	Chattanooga Street-Twenty-fourth Street to Twenty-second Street
	2589	Divisadero Street-Page Street to Jackson Street
	2589	Dolores Street-Twenty-second Street to Twenty-fourth Street
	2589	Twenty-fourth Street-Hoffman Avenue to Dolores Street
	2589	Twenty-second Street-Chattanooga Street to Howard Street
1944		
July 2 or July 9	2781	Arguello Boulevard-Euclid Avenue to Clement Street
	2781	California Street-Presidio Avenue to Maple Street
	2781	Clement Street-Arguello Boulevard to Thirty-third Avenue
	2781	Eighth Avenue-Fulton Street to Clement Street
	2781	Euclid Avenue-Parker Avenue to Arguello Boulevard
	2781	Geary Street-Thirty-third Avenue to Forty-Eighth Avenue
	2781	Parker Avenue-California Street to Euclid Avenue
	2781	Presidio Avenue-Sutter Street to California Street
	2781	Thirty-third Avenue-Clement Street to Geary Street
July 9	2781	Forty-eighth Avenue-Geary Street to Pt. Lobos Avenue
1947		
Mar. 29 or Apr. 10	3070	Carl Street-Clayton Street to Cole Street
	3070	Clayton Street-Carl Street to Frederick Street
	3070	Masonic Avenue-Oak Street to Page Street
1952		**SAN MATEO COUNTY**
Jan. 20	180	Mission Street-County Line to San Jose Avenue
	180	San Jose Avenue-County Line to Mission Street
	180	Mission Road-County Line to Holy Cross
Feb. 3	77	San Mateo Line-In City of San Mateo
Dec. 15	267	Mission Road-County Line to Cypress Lawn (Relocation, etc.)
1958		
Sept. 8	227	Visitacion Valley Line-San Bruno Avenue to County Line (Also Private Right of Way)
1963		
April 21	66	South San Francisco Line
1965		
Sept. 7	85	South San Francisco Line

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